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ORIGINAL ARTICLES.

THE CHEMICAL RELATIONS OF THE STOMACH CONTENTS DURING NORMAL DIGESTION.

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TRANSLATOR'S NOTE.

For the sake of abbreviating an article of twenty-six closely printed pages, the valuable series of experiments collected by Dr. Penzoldt have been rearranged, briefly described once and thereafter referred to by number. The expressions, "emptying of stomach," "close of digestion," etc., refer always to the completion of gastric digestion by the passage of food through the pylorus. Any statement that may seem ambiguous will, I believe, be explained by reference to the general heading. For example, *free acid* under A signifies free hydrochloric acid; *reaction* or *test* under C means the copper reduction test for sugar. Much under the headings B, C and D will be unintelligible without referring back to the particulars of the tests given under A and designated always by the same number. "P. C." means *post cibum*—after the meal. It must be remembered that this article deals only with normal digestion. Except some obvious deductions, nothing of importance has been sacrificed in the translation, despite the condensation. A. L. B.

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A.—TIME OF APPEARANCE OF FREE HYDROCHLORIC ACID IN GASTRIC DIGESTION.

(1) Gigglberger's experiments with 200–250 grams of meat.

Brain and calves' thymus, 1 hour P. C.; average continuance of test, 2 hours, 50 minutes (3 cases).
Pigeons and chickens, 2 hours P. C.
Calves' feet, partridge, roast beef, beefsteak, lamb, hare, beef tongue, 3 hours P. C.; average continuance of test, 3 hours, 50 minutes (12 cases).
Sliced raw ham, 3 hours P. C.; test slight or wanting.

(2) Experiments of assistants of Penzoldt with 250 grams of beefsteak (22 experiments).

In 20 cases free acid first appeared between 2 and 3 hours P. C.
In one case free acid first appeared 1½ hours P. C.
In one case free acid first appeared 2½ hours P. C., then disappeared till 4½ hours P. C.

In this series the average duration of the free acidity was 1¼ or 1½ hours, the minimum (each of two cases) being ½ hour, the maximum (one case) 2¼ hours. The free acidity persisted till the emptying of the stomach in five cases, till ¼ hour before this time in nine cases, till ½ hour before this time in four cases. In two cases the acidity disappeared an hour before the close of gastric digestion and in two ¾ hour before. Thus, on the aver-

age, the free acidity persisted till 20 minutes before the emptying of the stomach.

(3) Prager's twelve experiments with 100 grams of meat.

Beef sausage, warm roast fowl, 1 hour P. C.
Cold beefsteak, 1¼ hours P. C.
Rare, warm broiled steak, raw and cooked ham, bacon, 1½ hours P. C.

In all these cases, the free acidity persisted till the close of digestion, the duration of acidity being in eight cases, 1¼ hours; in two cases, 1¾ hours; in one case, 1 hour; in one case, 2½ hours. Thus the total duration of gastric digestion was in most cases about 2½ hours.

(4) Hensel's experiments with roast beef to determine the delay of free acidity by increasing the quantity of food.

100	grams,	free	acid	appeared	1	hour	P. C.
200	"	"	"	"	4–4½	"	"
250	"	"	"	"	5½	"	"
300	"	"	"	"	6	"	"

(5) Walther's 16 experiments with 200 grams of fish; average time of digestion for the whole series, 3½ hours.

11 cases, free acid appeared 1 hour P.C.
2 cases, " " " 2 " "
1 case (salt herring), no free acidity.
2 cases (carp and bloater), acidity only temporary.

The acid, having once appeared, remained for 2–2½ hours, except as stated above.

(6) Five other similar experiments by Walther. Free acidity occurred at an average of 2 hours P. C. and lasted for a brief period. In another case it was entirely absent.

(7) Prager's seven experiments with 100 grams of egg, stomach contents expressed ½ hour P.C. and every quarter hour thereafter.

No free acid found till 1 hour P. C.; it then persisted till ¼ hour before the close of digestion; digestion occupying 1½–3 hours.

(8) Croce's 20 investigations with 150 grams of vegetable food, the first test being made 1–1½ hours P. C.

Albert biscuits, acidity lacking 1 hour 25 min. P. C., present 1 hour 55 min. P. C.

Stewed peas, acidity lacking 1¼, 1¾, 2¼ hours P. C., present 2¾ P. C. Total duration of digestion, 4 hours 5 min.

Stewed lentils, acidity lacking 2 hours 5 min. P. C., present (weak) 2 hours 35 min. P. C., present (strong) 3 hours 10 min. P. C. Total duration of digestion, 4 hours 15 min.

Green beans (no statement as to acidity) required over four hours for digestion. Other vegetables required less than four hours.

(9) Prager's 14 experiments with 100 grams of different breadstuffs. Free acid was always found 1 hour P. C., and it persisted till ¼ hour before the close of digestion. It was not examined for before 1 hour P. C.

(10) Twenty-five experiments by six investigators, using 70 grams of wheat roll and 200 grams of tea.

Free acid always found 1 hour P. C. In two cases only was an earlier test made, when it was found ¾ hour P. C. In all cases it persisted nearly or quite to the close of digestion.

(10[1]) Langguth's three experiments with 70 grams of white bread. Free acid found ¼ hour P. C.

(11) Hensel's five experiments with 70 grams white bread.

5	minutes	P. C.	no	acidity			
20	"	"	"	"	in	2	cases
20	"	"	weak	"	"	3	"
35	"	"	no	"	"	1	"
35	"	"	weak	"	"	1	"
35	"	"	marked	"	"	3	"
50	"	"	"	"	"	5	"

(12) Six similar experiments by Prager. Acidity found 40–55 minutes P. C.

(13) Hensel's experiments with different amounts of dry Albert biscuit [cf. (4)].

50	grams	free	acidity	1½	hours	P. C.
100	"	"	"	1½	"	"
150	"	"	"	2	"	"
200	"	"	"	2½–3	"	"

In all cases, the acidity persisted till ¼ hour before the close of digestion.

(14) Hensel's experiments with Albert biscuit and 200 grams of water [cf. (13)].

50	grams	Albert	biscuit,	acidity	¾	hour	P. C.
200	"	"	"	"	2½	"	"

These experiments showed that the addition of water hastened the appearance of free hydrochloric acid half an hour.

(15) Prager's experiments with 200 c.c. of liquids, tests made every quarter of an hour.

Water charged with CO_2, acidity appears ¼ hour P. C., lasting till ¼ hour before emptying of stomach into intestine, which occurred 1–1½ hours P. C.

Tea and black coffee.....	acidity appears	½	hr.	P. C.
Watery preparation of cocoa	"	"	1	"	"
Coffee with 5 c.c. cream.....	"	"	1	"	"
Cocoa with milk	"	"	1½	"	"
Milk (first investigation ½ hr. P. C.), 7 out of 9 cases.....	"	"	½	"	"
Milk (first investigation ½ hr. P. C.), 2 out of 9 cases.....	"	"	¾	"	"

In the above list the stomach emptied

itself 1½–2½ hours P. C., the acidity persisting till just before this time.

Leube-Rosenthal peptone solution	acidity appears	¼–½	hr. P. C.
Bouillon, Valentine's meat juice, Kemmerich's peptone, Dennayer's "	" "	½–¾	" "
Liebig's extract, Weyl's casein-peptone, Pool's gluten-peptone	" "	1–1½	" "
Sparkling and Moselle wines	" "	¼	" "
	" "	½	" "
Beer, pfalzer, Rhine wine, Ofner	" "	½	(trace) " " (marked)
Sweet wines, Malaga, Marseilles	" "	¾	" "

In this whole series the acidity persisted till just before the emptying of the stomach.

(16) Krieger's experiments with 500 c.c. of liquids.

Water, CO_2 water, syrup, clear tea, coffee, cocoa, with or without sugar, acidity appears ¼–½ hour P. C., and persists till the emptying of the stomach, 1–1½ hours P. C.
Cocoa, with milk, free acidity ¾ hour P. C.
Milk, no free acidity; stomach emptied itself 1 hour P. C.
Sour milk, free hydrochloric acid 1½ hours P. C.; stomach emptied itself 2 hours P. C.
Beer, white wine, free acidity ½ hour P. C.
Red wine, free acidity ¾ hour P. C.
Beer and wines left the stomach 1½–1¾ hours P. C.

(17) Hensel's experiments with different quantities of liquids [cf. (4) and (13)].

100 c.c. milk	free acidity	½	hour P. C.
200–300 "	" "	1	" "
400–500 "	" "	1½	" "
500 c.c. beer	" "	½	" "

(Same as for smaller quantities, but weaker.)
500 c.c. water ..... free acidity ¼ hour P. C.
(Same as in (15) and (16).)

B.—ALBUMIN AND PEPTONE REACTIONS IN GASTRIC DIGESTION.

Albumin determined by acetic acid on potassium ferrocyanide. Peptone by biuret reaction with alkaline solution of cupric sulphate. The numbers in parentheses refer mainly to the same experiments as in A.

(1) No tests made before 1 hour P. C. Brain and calves' thymus (3 experiments), little or no albumin. Poultry, roasts, beefsteak, ham, etc. (10 experiments), albumin marked 1 and 2 hours P. C., weak or negative between 3 and 4 hours P. C.; peptone about the same, any difference being in the slightly greater persistence of peptone.

(2) Variable results in 5 cases. In 11 albumin was pretty constantly present 1–2 hours P. C., disappearing toward the close of digestion, which was completed after 4 hours or more.

(3) In three cases albumin was slight or absent 1 hour P.C. (not examined for earlier). In eight experiments the albumin test was positive 1 and 2 hours P.C., weak or negative between 3 and 4 hours P.C.

(18) Two experiments of Langguth with beefsteak showed a weak test for albumin ½ hour P. C., which later became plain but never marked. Peptone was present earlier than albumin.

(5) Albumin was apparent 1 hour P. C., weak 2 hours P.C., afterward was present only in traces if at all. Peptone was present till shortly before the emptying of the stomach. In three experiments with shell-fish, codfish and eels, the peptone test was weak in the second hour.

(7) Albumin was present from ½ to 1 or 1½ hours P. C. The precipitate was never heavy and after 1½ hours was a mere trace or altogether absent. Peptone, same as albumin.

(15) In this group of experiments were thirteen with 200 c.c. of milk (raw, boiled and sterilized). In three (including two with sterilized milk) albumin was not found in any of the quarter-hour tests. In ten cases albumin was found ½ and ¾ hour P. C., afterward it was absent. Peptone was present ½ and ¾ hour P. C., weakening after one hour P. C., entirely absent toward the close of digestion.

(19) Twenty-four reliable experiments of Croce with about 200 grams of vegetable food.

Apples, cherries, cucumbers, turnips, cauliflower salad; albumin never found.

Lentils, spinach, "rape-cabbage," beans, radishes, tapioca, asparagus, some preparations of potato and some breadstuffs; albumin sometimes weak, sometimes absent.

Cakes, rice, cauliflower greens; albumin marked in the beginning, then disappearing.

Stewed peas; albumin as well as peptone weak in the beginning, then very marked.

Peptone was always lacking after apples, cherries and radishes. Note the discrepancy with the albumin reactions. Peptone was weak or absent with asparagus and "potato-vegetables." Peptone was apparent early, later disappearing, with white bread, "potato-fritters," rice, spin-

ach, "rape-cabbage," beans, turnips, cauliflower greens. It was always apparent after taking cakes, "groat-bread," stewed potatoes, lentils, asparagus salad, cauliflower, tapioca.

(12) Albumin was present in the greater half of digestion, absent in the shorter latter stage. Peptone was present from one hour P. C. almost to the close of digestion. (Thirteen experiments are referred to here, instead of six.)

(10) Albumin usually found 1 hour P. C., persisting till 1½ or 2 hours P. C., exceptionally till the end of digestion. Peptone was present as in (12).

(10[1]) Albumin distinct ¼ hour P. C., weak after ¾ or 1 hour P. C. Peptone weak but apparent ¼ hour P. C.

(13) No difference was found in the relation of albumin to the amount of food taken, except that with milk the test which was entirely absent for small quantities became apparent with larger quantities (cf. (15) B). The duration of the peptone test varied directly as the quantity of food for meat, milk and cakes.

100 grams meat, peptone test persisting till 2 or 3 hours P. C.; average duration of digestion 3½ hours.

300 grams meat, peptone test persisting till 6½ hours P. C.; average duration of digestion 7½ hours.

C.—THE GLUCOSE REACTION.

Both Tremmer's test and the ordinary application of the alkaline solution of cupric sulphate were used. These reactions always failed in substances free from starch and sugar. In all 107 experiments were made.

(19) Stewed potatoes, potato cakes, peas, lentils, tapioca, black bread, cherries; sugar present throughout digestion.

"Potato vegetables," rice, spinach, "rape-cabbage," cakes; marked test early, less or none toward the end of digestion.

Cauliflower greens, yellow turnips, test weak or negative.

With all the foregoing except cherries starch was shown by the iodine and potassium iodide solution to be present.

Asparagus (3 experiments), cauliflower (2 experiments), beans, cucumber salad, radishes, apples, sugar test negative.

(9) Sugar always present at the end of one hour (not examined for earlier), disappearing on the average ¾ hour before the end of digestion (minimum ¼ hour, maximum 1¼ hours before the end of digestion).

(10) Kauderitz *et al.* with 70 grams of white bread and tea. The sugar disappeared, on the average, ½–¾ hour before the emptying of the stomach.

(10[1]) Sugar always present as early as ¼ hour P. C., becoming much less after 1 hour P. C.

(13) The more breadstuff was taken the longer the sugar remained, but it usually disappeared 1 hour before the close of digestion.

50	grams	cakes	negative	after	1¼	hours	P. C.
100	"	"	"	"	2¼	"	"
200	"	"	"	"	3	"	"

The sugar test was weaker and less persistent if 200 grams of water were taken with the cakes [cf. (14) A].

D.—THE UNRELIABILITY OF UFFELMANN'S TEST FOR LACTIC ACID.

A dilute solution is made of ferric chlorid and carbolic acid. This has the color of amethyst. Lactic acid and lactates change it to a greenish-yellow.

Penzoldt says that the reaction is interfered with by hydrochloric and lactic acid, and that other substances, such as alcohol and cane sugar, may give the same reaction. [I have verified this statement. A. L. B.]

(3) Lactic acid test found from 1 hour P. C. (not examined for sooner) till the end of digestion. After beefsteak the test was weak, early and toward the close of digestion.

(2) Two experiments by Moch in this series. Lactic acid test first appeared 2–2½ hours P. C., remaining till one hour before the close of digestion.

(21) Langguth in two experiments with beefsteak found the test in the first hour; with eggs the reaction was not marked except at the height of digestion.

(10[1]) The reaction first appeared ¼ hour P. C., becoming weak 1 hour P. C., or it was weak throughout the first hour of digestion.

(10) Test found from 1 hour P. C. (not examined for sooner) almost to the close of digestion.

(9) Reaction marked and persistent if food was taken dry; variable and not marked till the close of digestion if food was taken with tea.

(8) After eight vegetable foods, including breadstuffs, rice, etc., the reaction was present from 1–1½ hours P. C. to the end of digestion.

After ten vegetables, including peas, lentils, etc., it was marked early in digestion. With carrots and asparagus the reaction was weak, and with cauliflower and tapioca entirely absent after the beginning of digestion.

(4), (13), (17) No difference was found due to the quantity of food, except that as digestion was longer the duration of the lactic acid test was greater.

(15) Ten experiments each with milk and a group of non-alcoholic beverages (soft drinks) showed a variability in the lactic acid test which, however, was usually more apparent in the latter half of digestion.

In nine experiments with alcoholic drinks and eleven with peptone solutions, the test was pretty constantly found from ¼ hour P.C. till the close of digestion.

(22) Cohn v. Mehring 1 hour after a meal of 150 grams of black bread found 1.6 per cent. of hydrochloric, 2.07 per cent. of lactic acid.

(23) Penzoldt found the Uffelmann reaction in the wash-water after lavage of the empty stomach. Having obtained many liters of wash-water, he endeavored to precipitate zinc or calcium lactate, but failed utterly. He naturally concludes that the Uffelmann test occurs in the absence of lactic acid and fails when lactic acid is presumably present, also that even if the test always indicated lactic acid, it would be practically useless on clinical grounds.

GENERAL CONCLUSIONS.

A longer gastric digestion corresponds with a greater bulk of food, a higher proportion of albumin and, consequently, a later appearance of free hydrochloric acid.

According to Moritz, albumin fixes this acid till the ratio 1:8 or 1:12 is exceeded.

Lack of hydrochloric acid depends on (*a*) a large amount of albumin, (*b*) of ash, (*c*) a peculiarity of the albumin or of the connective-tissue inclosure. (*a*) and (*b*) are illustrated by the fact that cauliflower, containing 2½ per cent. of albumin, allows free acidity 1 hour P. C., while lentils, containing 25.7 per cent. and three times as much ash as cauliflower, allow free acidity only after 3 hours. (*b*) is not so important as (*a*). In illustration of (*c*), calves' thymus, which contains a trifle more albumin than beef and decidedly more ash, absorbs only 9:1000 of hydrochloric acid, as compared with 20:1000 for beef, so that free acidity occurs 2 hours earlier with the former.

300 grams of beef allow free acidity five hours later than 100 grams; with the same amounts of milk, the difference is only ½ hour; with fluids nearly or quite without albumin, the delay is not noticeable.

There is both a relative and an actual increase in the duration of free hydrochloric acidity when (*a*) the percentage of albumin is lowered or (*b*) the bulk of food is diminished.

Food taken with water is more quickly digested than when taken dry.

2:1000 solutions of hydrochloric acid (the normal gastric strength) extract more soluble albumin from meat than does water.

The filtrate of milk artificially coagulated by hydrochloric acid contains no albumin, but soluble albumin is found in the stomach ½ hour P. C., hence the gastric juice must have a solvent action. Bread contains more soluble albumin than cooked meat; after the former, albumin is found ¼ hour P. C., after the latter ¾ hour.

Soluble albumin is not abundant during digestion, probably on account of concomitant absorption. In the last third of digestion it is absent, being instantly peptonized or absorbed.

Peptonization is concomitant with the dissolving of albumin; in fact, unless much albumin is present, peptone alone is found.

Peptones, and more particularly sugar, dissolved in water, are more quickly absorbed than the water itself.

Vegetables containing less than 10 per cent. of carbohydrates usually fail to give a sugar test in the stomach contents, probably from the rapidity of absorption. Foods after which the sugar test is always present for some time during digestion contain 20–50 per cent. of carbohydrates. Sugar is usually completely absorbed long before the end of digestion.

The best test meal consists of 70 grams of white bread with 200 c.c. of water, or milk alone. Meats are not suitable for the ordinary tests.

APPENDICITIS—REPORT OF A CASE.

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It is the object of this paper not to enter into a discussion of appendicitis, but to report a case that came under my observation, to show how difficult it often is to make a diagnosis, and to demonstrate the futility of medication in certain cases.

I was called July 13th, at 3 P.M., to attend G. C. K., white, male, age 7 years. On inquiry I learned that the child was attacked at 10 A.M. with violent vomiting and pain in the abdomen. The vomiting and pain had continued up to the time of my visit, in spite of a number of domestic remedies given by the mother. The boy, a fine healthy fellow, had been perfectly well up to the sudden attack that morning. On further inquiry I learned that the boy had eaten heartily of watermelon just before the attack, and had vomited quite a quantity of the seeds. The bowels had moved once that morning.

On examination of the abdomen I found that he complained of pain one inch to the *left* and just below the umbilicus—a localized pain increased on pressure. No swelling or tumor over this region. I examined carefully the right iliac region; result negative. There was no tenderness whatever over McBurney's point. Pulse, 100; temperature, 101° F.; tongue coated.

The case was regarded as one of indigestion, with probably a malarial element, and was prescribed for accordingly.

For the pain and nausea a hypodermic of morphia, gr. $\frac{1}{8}$, atropia sulph, $\frac{1}{100}$ gr., was given. Calomel, grs. iij, lactopeptine, grs. xv, divided in powders 3, were ordered to be given every two hours.

Quinine, grs. ij, at 6, 9 and 12 the next morning, also a dose of castor oil if the calomel failed to act.

The hypodermic relieved the pain and vomiting; the litttle patient was left comfortable and with a hope that all would be well after the medicine had acted.

Next morning (July 14th) the father called to see me and stated the boy was no better, had passed a bad night—the calomel had been retained, bowels had not acted, castor oil had been rejected, vomiting and pain had returned. He had not attempted to give the quinine.

He was instructed to return and give the child a stimulating enema of turpentine, egg and water, to repeat this if necessary until the bowels moved; also to apply a mustard plaster over stomach. A mixture of tr. cardamon comp., soda bicarb., aq. menth. pip., was ordered for the nausea.

I promised the father to be over (he lived some distance in the country) as soon as I could attend my morning calls.

The child was seen a few hours afterward, and at a glance it was evident he was very ill.

Countenance anxious, pulse 130, typical of peritonitis. Abdomen distended and tympanitic; pain now diffused; temperature 102° F.; vomiting constant; bowels obstinately constipated.

Two enemata had been given without any result.

It was clear that there was obstruction, but the cause, intussusception, volvulus, fecal impaction, appendicitis or worms, was the point to decide.

To relieve urgent symptoms, the hypodermic of morphia and atropia was repeated, ice-bag to abdomen, and measures *per rectum* to open the bowels. A full dose of sulph. magnesia was also given.

So long as the child was kept under morphia the pain and vomiting were in a measure relieved.

I remained with the child until 2 A.M., July 15th, failing to relieve him or get any movement on his bowels. My colleague, Dr. D. J. Spotswood, was called in consultation. We discussed the propriety of an exploratory operation, but decided that his condition was such that it was not warranted. We agreed to continue our efforts to remove the obstruction. Discontinued the ice-bag and substituted hot flaxseed poultices. We also washed out the stomach with a boracic acid solution by means of the stomach tube, and introduced four ounces of olive oil. The oil was retained and in a few hours afterward passed through the bowel; this aided by injections moved the bowels freely.

After this the child seemed better; tympanites, pain and vomiting were in a great measure relieved, so much so that

we were about to congratulate ourselves that the boy would recover.

The next day he was worse again; the vomiting returned, accompanied by the other bad symptoms.

He vomited during the day two very large round worms six or eight inches in length.

The family now felt sure the worms were the cause of all the trouble, and insisted that the child be dosed for worms.

Thinking perhaps the worms might be an element in the case, and to comply with the earnest wish of the parents, calomel and santonine was given, but without results.

The child continued from bad to worse, and died on the seventeenth day of his illness.

Autopsy six hours after death. The abdominal viscera only examined.

The abdomen very much distended with gas; also the intestines.

On section found a diffused, purulent peritonitis; adhesions everywhere.

The appendix at its extremity was gangrenous and perforated.

We found a hard fecal impaction (about the size of a bean) packed down in the extremity of the appendix and almost out through the perforation.

REMARKS.—The history of this case, symptoms and all, shows how difficult it is to make a diagnosis early.

It further shows the necessity for early operation, and how often conservatism proves impotent.

THE SPECIAL THERAPEUTIC VALUE OF INDIAN HEMP IN CERTAIN MORBID STATES.*

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Much has been written on Indian hemp and numerous are the diseases in which it has been employed with success. Nevertheless it is much less frequently used than it should be. Several causes have contributed to this more or less complete abandoning of the drug by physicians, among the chief ones being the variability of its action, the occasional symptoms of poisoning which it has produced, and the ignorance of the fact that there is a certain number of diseases in which it is particularly useful.

According to my own experience, cannabis Indica is especially efficacious as an analgesic when it is desired to combat the element pain associated with spasmodic phenomena. It exercises a favorable action in all forms of headache, whether it be purely functional or be dependent upon an organic affection. Thus I have succeeded in controlling with Indian hemp the violent headaches of cerebral tumors. In these cases it may be equally as effective as morphine subcutaneously or it may be less active. It is able to abort an attack of migraine either at the beginning or after it has persisted for a certain time; with its prolonged use we are able to diminish the frequency and intensity of the attacks. Yet in the palliative treatment of a pronounced hemicrania it is, in general, inferior to antipyrine, phenacetine and trinitrine. As to nitroglycerine, this drug has often given me the best results in decreasing the number and intensity of attacks of migraine when administered, for a long time and in small doses, as suggested by Gowers. Finally, I have employed Indian hemp in the headache of chronic uremia; it may consequently be recommended to those physicians who fear to employ morphine in uremic subjects, a fear which I may say, in passing, I have never shared. But there is one particular form of headache in which the drug acts as an actual specific; this has been confirmed both by my own observation and those of my fellow-practitioners.

The variety to which I refer might be styled a continued or sub-continued type. It begins in the morning and persists during the entire day. It may disappear toward evening, but if the patient arise during the night he will feel it again. The pain is generally diffuse, extending through the whole head; it is dull and may become aggravated at times for several moments and last for weeks, months and even years. Without being violent enough to prevent the patient fol-

*Translated from *La Semaine Medicale*, No. 50, 1894, by F. H. Pritchard, M.D.

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lowing certain occupations which do not require considerable intellectual effort, it constitutes a constant source of ill-health and distress. This form of headache is observed in both sexes, more frequently in young or middle-aged persons. Its etiology is obscure. Many of those affected present no signs of anemia, and even if this diseased state exist and be treated it will have no influence upon the headache. I have not been able to trace any relation between this variety and an excess of uric acid in the blood, and I have met with disappointment in trying to treat this headache by means of dietetic measures and the remedies ordinarily employed in uremia.

It is, however, easily cured with cannabis Indica, either alone or associated with other drugs to combat concomitant disturbances. I ordinarily employ the drug in the form of the extract, administering from 15 milligrams to 3 centigrams in pills morning and evening. If an amelioration follows I continue it in the same doses; but, on the contrary, if there is no marked improvement in ten to fifteen days I increase the dose to 6 centigrams of the extract in the evening and 3 in the morning. If these doses are still insufficient I prescribe 6 centigrams morning and evening. In cases which are particularly obstinate I elevate the dose progressively, giving preferably the stronger dose in the evening, until I obtain a decided amelioration or symptoms of poisoning. Each year I treat a large number of cases of continued or sub continued headache. From the numerous examples which I might present I shall select two cases which will illustrate the type.

In one, the patient, a woman aged twenty-five years, had been affected for about a year with a continuous headache which was especially located in the occiput. The pain, which was generally dull at times, presented periods of exacerbation, accompanied by nausea without vomiting. Sometimes she noticed a weakening of her visual powers, but she never had scintillations of light nor other subjective visual sensations. She was always cold, especially during the night. Her appetite was good; digestion was painful; there was besides constipation with distention of the intestines. Under the influence of Indian hemp, together with gentian and Peruvian bark, I had the satisfaction of obtaining in eight days a notable improvement which continued to increase, with a complete cure in one year, during which time the treatment was continued with perseverance.

The second case was that of a woman of forty-two years who had suffered for seven years from attacks of headache which had appeared after her last confinement, and would come on every eight to fifteen days. The seizure would last for two to two and a half days and occasionally longer. The pain was more severe in the evening than during the day; it was situated in the temples particularly. Beyond a sensation of tingling and heat in her eyes she experienced no other visual disturbances. In the course of years these attacks of headache whose etiology was very obscure increased in intensity. During the intervals her health was perfect, her digestion good and her stools regular. I prescribed the extracts of cannabis Indica and gentian. During the month which followed she only had a few slight attacks, which soon disappeared under the use of the hemp, to which I added, later, the bromohydrate of caffeine.

In the past twenty years, during which I have employed Indian hemp in this form of headache, I have had but few failures to record. I might add that the results were especially striking precisely in the most inveterate and seemingly most obstinate cases.

I do not think that there is either any direct or indirect etiological relation between this disease and migraine, especially as it is sometimes accompanied by migrainous exacerbations; yet that which will relieve these will not cure the disease. In the paroxysms I habitually employ antipyrine, phenacetine, the bromohydrate of caffeine, etc., in elevated doses, after which the hemp is continued.

In neuralgia Indian hemp is one of our best remedies, as Russell Reynolds, of London, has demonstrated and of which I am equally convinced. It also acts well in the lightning-like pains of tabes dorsalis; but according to my experience, antipyrine, phenacetine and, above all, exalgine, are still more efficacious. An important group of morbid phenomena which are more or less controllable by cannabis Indica are gastralgias and enteralgias of various origin. This subject having been treated in an important article by Professor Germaine Sée, I shall not dwell long on it. I

shall only recall that, according to this French clinician, the extract of cannabis Indica exercises a special sedative action upon the pneumogastric nerve and gives excellent results in the treatment of gastro-intestinal neuroses independent of disturbances of the chemistry of digestion. In these cases it relieves the painful sensations and restores the appetite. When there is an excess of hydrochloric acid, Professor Sée orders the bicarbonate of soda, in large doses about four hours after each meal, to assist the action of the hemp. My personal experience has confirmed in all particulars the great value of this drug in gastro-intestinal pains. But I should go still further than the Parisian professor and state that I am fully convinced that Indian hemp not only exerts a favorable influence in purely functional disturbances, but also in a large number of gastric and intestinal affections of organic origin.

There is another group of cases where this remedy will render good service; these are cutaneous diseases associated with intense itching. I always attempt to treat itching by local applications, as in the majority of cases it is of local origin and depends upon certain morbid disturbances of the peripheral nerves. But when, as is sometimes observed, local measures fail, I invariably have recourse to cannabis Indica. It is, above all, in senile pruritus that this remedy has been found useful. In these cases I commence with Indian hemp, and if it fail me I then give chloral. In general, it will suffice to administer the hemp in the evening on going to bed, for it is especially during the night that the pruritus is severe. Still there are grave cases where it is necessary to employ the remedy even during the daytime. As it is indispensable, in order to gain control of the itching, to obtain an immediate and rapid effect of the drug, it is preferable to use it in the form of a tincture, as was suggested by Russell Reynolds. Twenty drops of the tincture equal six centigrams of the extract. From five to ten drops may be taken upon a lump of sugar, which dose may be repeated as often as is necessary. Thus the dose of the remedy may be exactly measured.

Since I have been accustomed to prescribe this drug I have rarely had occasion to observe any disagreeable consequences from its administration. I have met with but two or three patients who have refused to continue the remedy, as it gave them vertigo. Only once did I observe grave symptoms of poisoning, and that in a young man of twenty-nine years who had been subject since childhood to attacks of headache. Each paroxysm began with disturbances of vision resembling hemianopsia and was accompanied by confusion of mind and a sensation of weakness; then a pain would set in either in the forehead or vertex and be associated with nausea, but without vomiting. He would feel cold and be obliged to lie down. These seizures were typically migrainous, very violent and setting in every month; during the last few years they had become much more frequent. They were often brought on by a strong light; constipation favored their appearance. The patient was also myopic. In his case I ordered Indian hemp, one pill containing three centigrams of the extract, morning and evening. I also advised him to take phenacetine during the paroxysms (30–60 centigrams) and gave him besides some pills of aloes and myrrh. As there was no amelioration at the end of a month and he having three attacks during this time which were not to be controlled by phenacetine, I increased the dose of the hemp to forty-five milligrams, morning and evening. The next day he wrote me the following: "I took yesterday evening and this morning the pills which you last ordered. The result was unfavorable. On arising this morning I felt very dull. This disappeared after breakfast, probably under the influence of the coffee. But on returning home the sunlight seemed more intense than usual and all the surrounding objects appeared to dance before my eyes. I was as if in a half-unconscious state. A friend who met me found my lips livid and my eyes glassy. At this moment I experienced a sensation as if I were being carried along at the rate of fifty miles an hour. My friend obtained me a glass of water, which enabled me to go about my business. On arriving at my office I felt worse; I could not work and it was with difficulty that I answered questions asked me. My head was very heavy, I felt as if a weight were upon my chest and I noticed a prickling in my limbs. A physician who was called advised me to go home and to sleep off the effects of the drug. I did so. Since this morning I feel as if I were under the influence of a horrible nightmare."

As the pills prepared according to my second prescription were obtained at another source than the first, I advised the patient to return to the use of the first, which he had borne well. A month later I saw my patient. His headache had decreased, but he had undergone another attack of poisoning which he described thus:

"My supply of pills prepared by the first druggist being exhausted, I thought that I might use those made by the second druggist and which had produced such a disagreeable result upon me. I therefore took half of one of these pills in the morning and three-quarters of one in the evening, without noticing any appreciable effect. On the second day following I took half a pill, after which I went into the city according to my usual habit. In crossing London Bridge the sun and daylight seemed to me particularly glaring. At the same time I experienced a singular torpor, and it required decided effort to keep up the conversation with a friend who accompanied me. These symptoms increased rapidly in intensity to such a degree that I could scarcely use my voice and limbs. I tried to conceal my condition from my companion in avoiding his look carefully. I do not know why I did this. My friend left me as soon as we had crossed the bridge. I then retraced my steps, the symptoms becoming aggravated rapidly. I experienced a difficulty in breathing and time seemed infinitely long, an illusion which persisted as long as the poisoning continued. In the train I could not keep quiet. My limbs would jerk and twitch, my temples beat and I was obliged to change my position every minute. On arriving home I went to bed at once, but I could not fall asleep. My wife thought I had gone crazy. I seemed to have grown twenty years older. I was pale, my lips were livid and my eyes haggard. I spoke without ceasing for two whole hours. Then having taken a cup of tea, with bread and butter, I fell asleep for a few moments, to awaken with a start. I then went to sleep again and slept for an hour. After this I felt restored to my usual health, excepting a sensation of weakness. My first poisoning 'spell' had a comatose character, while the second time there were symptoms of excitement."

The painful and disagreeable symptoms which Indian hemp is capable of producing should not force us to renounce its use, for it is a precious remedy. A long experience has convinced me that these accidents are absolutely exceptional. They result from an idiosyncrasy or a variability of the drug in its active constituents. There are individuals who are powerfully influenced by ordinary doses and even weak doses of the extract of cannabis Indica, as has also been observed of other drugs, as the iodide of potash, quinine, etc.

In order to avoid these one should always begin with small doses of the drug and only increase them slowly and when we are certain of tolerance. The patient should also be carefully instructed in this regard, even when obtaining a fresh supply from the same pharmacy. The tincture of cannabis Indica is well adapted to accurate dosage. Therefore this preparation should always be used when a rapid and intense action is desired, as, for example, in the treatment of pruritus. But whenever a slow and continuous action is wished, the extract is undoubtedly the best preparation. To combat certain concomitant symptoms I repeat that it is often necessary to associate the remedy with other drugs, as with aloes if there be constipation, carbolic acid and menthol when there is flatulent dyspepsia, alkalies and bitter tonics in case of catarrh of the stomach. The conclusion of the preceding is that in headaches of a continuous or sub-continuous type, senile pruritus, as well as in the various forms of gastralgia and enteralgia, there is no remedy more active than cannabis Indica, administered in the manner described.

Pepsin Lavements in Dysentery.

Pepsin has been applied to very many of the diseases of the nosology, yet it remained for Dr. Summers, of Waukesha, Wis., to discover that it possesses a most satisfactory therapeutic action in dysentery. He washes out the bowel with a strong solution of pepsin (½ ounce to 6 ounces of warm water) every three hours, which act, he declares, "clears off the mucous surface effectually." He next employs a soothing injection, such as laudanum and starch, as hot as can be borne. He declares that after two or three washings and injections the patient experiences great relief, and healthy action is at once set up, when, if constitutional conditions receive due consideration, rapid healing follows.—*Medical Age.*

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

TREATMENT OF LEUCOPLAKIA.

Dr. S. Rosenberg (*Muenchener Medicinische Wochenschrift*, No. 39, 1894), in an obstinate case of leucoplakia of the tongue which had been treated in vain with the most varied remedies for seven years, caused the disease to disappear in a few days under local applications of a 20 per cent. solution of the iodide of potash.

MORPHINE IN INSUFFICIENT UTERINE CONTRACTIONS.

Dr. Kupffer (*La Semaine Médicale*, No. 55, 1894) has found morphine to be an active remedy in uterine inertia during labor. He employed the following formula:

℞ Muriate morphine..... 0 | 02 (gr. ⅓).
Cherry laurel water.....20 | 0 (℥v).

Twelve drops once or twice during the course of the labor.

He thinks that this remedy acts by diminishing the irritability of the striated muscular tissues, thus producing a relaxation of the perineum while it increases the tonicity of the non-striated fibers, including that of the uterus; whatever be the explanation, he has often observed that small doses of morphine will stimulate the activity of the uterus. One single dose is usually sufficient, but a second may be given if the pains weaken and the head is lodged deeply in the pelvis. At the moment of the expulsion of the head he usually administers a few whiffs of chloroform, thus obtaining greater relaxation of the perineum and a quieting of the pains. He also states that this drug is valuable in hastening tardy contractions when there is uterine hemorrhage.

ERGOT IN THE NIGHT SWEATS OF PHTHISIS.

Dr. Goldenbach (*Hospitals-Tidende*, No. 30, 1894) has employed ergot with success in a number of cases of nocturnal sweating in tuberculosis of the lungs. He administers each evening thirty centigrams (grs. v). In other cases he has employed it subcutaneously with good results. He made use of the following solution:

℞ Extract ergot..... 3 | 0 (grs. xlv).
Dilute alcohol.....
Glycerine..... } 5 | 0 āā (5 j¼).
Distilled water.....

A syringeful to be injected each evening.

Though he has used this drug for a certain length of time in these cases without disagreeable effects, yet he would not recommend it as absolutely harmless, for a phthisical patient may be poisoned by ergot as well as a healthy person, after a longer or shorter time.

TREATMENT OF MEASLES.

Dr. Sevestre (*La France Médicale*, No. 41, 1894) would have the little patient placed in a large-sized room where there will be no exposure to draught. In summer, during the warm portion of the day, the windows may be left open, while in winter the temperature of the room should be kept even and the room be well ventilated. Do not allow the patient to become uncovered. Keep children in bed ten to fifteen days after the appearance of the eruption, allowing them first to go out twenty to twenty-five days after its appearance. The child's mouth should be washed with an antiseptic solution. Porridges, milk and occasionally an egg will be sufficient as a diet. As soon as desquamation sets in rub the child with borated vaseline and give one or two baths containing borax. Medical treatment is purely symptomatic. For the diarrhœa of the beginning of the disease, lessen the amount of food, apply hot fomentations to the abdomen, give a rectal injection and internally the subnitrate of bismuth with or without opium. In case the cough be very distressing, then prescribe:

℞ Tr. aconite root.....10–20 gtts.
Extr. opium..... 0 | 02–05 (gr. ⅓–¾).
Syrup ether.....10–20 | 0 (℥ijss–v).
Mucilaginous mixture 60 | 0 (℥ij).

To be taken by the teaspoonful.

Hot fomentations to the neck and chest, opiates according to the age of the patient, the bromides or inhalation of steam, are also useful. If the conjunctivitis be very

* In charge of the translator, F. H. Pritchard, A.M., M.D.

intense, use compresses wet with a tepid boric acid solution. In case the coryza be severe, irrigate the nose with a warm solution of salicylic acid (1:1000). For the convulsions and nervous erethism employ lukewarm baths, local application of water of the temperature of the room and the bromides. If the eruption is slow in coming out, look for the cause and administer diffusible stimulants, as the acetate of ammonia, hot infusions, etc.

SUBCUTANEOUS INJECTIONS OF ARSENIC IN CHLORO-ANEMIA.

Dr. F. Pacetti (*La Semaine Médicale*, No. 55, 1894) has obtained excellent results with subcutaneous injections of a solution of arsenic in the treatment of chloro-anemia. He employed a watery solution (0.25 per cent.) of the arseniate of soda, injecting every two days a syringeful. In the course of sixty injections a very decided improvement will have been obtained, when its hypodermic administration may be discontinued and the same drug be continued internally in very small doses to maintain its action. An important point is to combat the chronic constipation from which chlorotics usually suffer, thus giving rise to a more or less auto-intoxication from absorption of harmful substances from the feces. This he treats most successfully by copious daily enemas of water containing a certain quantity of tannic acid. These injections act both as evacuants and as antiseptics. Every morning a full bath, which is gradually cooled, may be taken. With these measures he has obtained a complete cure in cases that were apparently very much advanced.

TREATMENT OF CYSTITIS BY SUBLIMATE INSTILLATIONS.

Dr. Colin (*Medicinische Neuigkeiten*, No. 38, 1894) has tried instillations of solutions of corrosive sublimate in the management of cystitis, as recommended by Guyon. Irrigation of the bladder in case the solution was stronger than 1:4000 was very painful; violent vesical tenesmus would be observed with quite a certainty. On the contrary, instillations of solutions of 1:4000 to 1:5000 were well tolerated and were of service in cases where the nitrate of silver was inactive. Out of thirty-four cases treated thus, twelve were cured, nine greatly improved, nine ameliorated and four uninfluenced. The action was immediate in gonorrhœal as well as in tuberculous cystitis, particularly with regard to the rapid diminution of the pains; even in the most inveterate cases instillations acted favorably upon the number of microbes, the vesical capacity and the pains. The same was true of cystitis of prostatic patients and that of unknown origin. Before instillation the patient should urinate. They are best given at first every two days, later daily, increasing progressively the strength of the solution. The strongest concentrations, 1:1000–1:5000, are only to be used in long-lasting cases. The tuberculous forms require the greatest patience in their treatment; a complete disappearance of the bacilli was not to be brought about. The quantity of fluid injected was five to ten grams into the bladder itself, and ten to fifteen drops into the neck of the bladder and the posterior urethra. No alcohol should be added to the solutions on account of its irritating properties; tartaric acid may, however, be employed.

CHLOROSIS.

Dr. F. W. Warfwinge (*Hygiea*, lvi, heft 6, p. 453, 1894) believes that chlorosis is a distinct and separate disease from anemia. In chlorosis, iron in large doses, preferably Blaud's pills, is indicated and is of the greatest importance, while in simple anemia regulating of the diet is the chief indication, while the use of iron is secondary. The iron in the foods is absorbed to cover the deficiency in the red corpuscles. Chlorosis is essentially an affection of puberty.

NON-OPERATIVE TREATMENT OF UTERINE FIBROMATA.

Prof. Lutaud (*Journal de Médecine de Paris*, July, 1894) advises wearing an abdominal bandage in case the woman suffer from symptoms of compression from the increase in size of the tumor. Massage will also relieve the secondary symptoms, meteorism, constipation and cystitis, as well as help to reduce the size of the abdomen. If there be severe metrorrhagia introduction of a laminaria or a sponge tent will assist in controlling hemorrhage. The galvanic current is also

of service, the positive pole in the uterus and the negative applied to the abdomen. Hydrastine has been employed by him with success for several years, not only in controlling the hemorrhages but also in reducing the accompanying uterine hypertrophy which is observed with these tumors. He injects the drug hypodermically, using the following formula:

℞ Muriate hydrastine..... 0 | 50 (grs. vijss).
Distilled water..... 10 | 0 (ʒijss).
One syringeful to be injected each day.

In case they are not well borne he administers the tincture of hydrastis canadensis as follows:

℞ Tr. hydrastis canad..... 4 | 0 (ʒj).
Syrup opium..... 30 | 0 (ʒj).
Distilled water.....150 | 0 (ʒiv. ʒvj).
A soupspoonful three times a day.

Ergotine is the remedy usually employed and deserves the confidence of the practitioner. It is best administered hypodermically. Whenever there are heart complications with great vascular distention he associates with it digitalis and the iodide of potash as follows:

℞ Syrup digitalis..... 60 | 0 (ʒij).
Iodide potash..... 10 | 0 (ʒijss).
Syrup orange peel.....120 | 0 (ʒiv).
Ergotine..... 2 | 0 (grs. xxx).
A soupspoonful morning and evening.

Ergot may also be given by the mouth where it is objected to subcutaneously.

Constipation is an almost constant symptom in cases where the tumor is voluminous and is accompanied with pain and tympanites. These symptoms are due both to adhesions and to false membranes, so that both laxatives and opiates are to be used at times, as indicated. A highly nutritious diet should be ordered to prevent dilatation of the stomach and intestines. Magnesia associated with salol will combat the constipation and prevent intestinal infection:

℞ Calcined magnesia.....15 | 0 (ʒiv).
Salol..... 0 | 50 (grs. vijss).
Sufficient for fifteen powders. One at the beginning of each meal.

When there are vomiting and obstruction of the biliary passages he prefers calomel, which may be given with opium, to avoid colicky pains. He advises the following formula:

℞ Calomel..... 1 | 0 (grs. xv).
Extr. opium..... 0 | 05 (gr. ʃ).
Sufficient for ten pills or powders. One each morning and evening.

IODINE GIVEN WITHOUT DISAGREEABLE SYMPTOMS

Dr. Hardaway (*La Semaine Médicale*, No. 54, 1894) advises the following mixture as free from the ordinary disagreeable after-effects of the iodic preparations:

℞ Iodide potash.....15-30 | 0 (ʒiv-ʒj).
Citrate iron and ammonia. } 8 | 0 āā (ʒij).
Tr. nux vomica..... }
Water.....45 | 0 (ʒjss.)
Compound tr. cinchona .....60 | 0 (ʒij).
A teaspoonful after each meal.

SOME FATAL AFTER-EFFECTS OF CHLOROFORM IN CHILDREN.

Dr. L. G. Guthrie (*Centralblatt f. d. Medicinischen Wissenschaften*, No. 37, 1894) calls attention to a severe and nearly always fatal after-effect of chloroform in children, with the following course. Immediately or some hours after the operation vomiting occurs, the child becomes restless, delirious and cries constantly, while the whole appearance is that of one suffering from mania. The child's face is reddened, rarely pale, the eyes dry and the pupils dilated. After some time an apathic condition follows, while consciousness returns during the remission. Then follows wild delirium and thus it is continued until, in the course of several hours or a few days, the child succumbs. The writer has observed ten such cases, of which only one recovered. In all these there was violent and continuous vomiting; the vomited matter contained no blood, but always bile. The temperature was subnormal, rarely elevated. Death takes place with symptoms of increasing collapse. He ascribed the condition to a fatty infiltration of a previously fatty liver. In fatty liver in children he therefore thinks chloroform contraindicated. Clinically, however, this is difficult to diagnose.

Pilocarpine in Urticaria.

Dr. R. Abrams, of New York (*Med. Record*), claims excellent results from the use of this drug in the treatment of both acute and chronic urticaria. Adults should get the drug hypodermically in doses of one-sixth to one-half a grain. Children of one year should get it by the mouth in doses of one-twentieth to one-eighth of a grain every evening at bed-time. For children two or three years old the dose is one-fifteenth to one-sixth. The writer claims that pilocarpine is almost a specific. By administering the drug with care and increasing the dose gradually no untoward effects need be looked for. It is a good plan to stay with the patient for twenty minutes after giving the drug.

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SATURDAY, NOVEMBER 3, 1894.

EDITORIAL.

EXPERIMENTAL TYPHOID FEVER.

Sanarelli (*Ann. de l'Institut Pasteur*, April, 1894) gives an account of an exceedingly interesting series of experiments in the production of a disease by typhoid toxin which resembles closely that produced by the bacteria themselves. The toxin was prepared by inoculating flasks of the culture fluid with virulent typhoid bacilli, and allowing them to stand for about a month at a temperature of 37° C. They were then sterilized and kept at the ordinary temperature for about eight months, at the end of which time they were hermetically closed and allowed to macerate for several days at 60° C. The liquid in the flasks formed two layers, the upper being perfectly clear, which was carefully removed. The toxic and pathogenic effect of this fluid was tested on rabbits, mice, guinea-pigs and a monkey. The summary of the results obtained in reference to typhoid is as follows:

1. Eberth's bacillus, having penetrated the organism, produces a toxin which acts on the nervous system and brings about death by collapse.

2. In addition to this toxic effect, this toxin acts peculiarly on the mucous membranes, especially of the intestine, and thus brings about the familiar lesions.

3. All of the anatomical changes produced by the toxin, and independently of the virus, are accompanied by symptoms presenting very close analogies with those of human typhoid.

4. In experimental, as in human typhoid, Eberth's bacillus is not found in the intestinal contents; this fact militates against the idea that the disease is a process infectious in origin localized in the intestine.

5. The absence of the specific organism from the contents of the intestine is explained in two ways: (*a*) Because typhoid fever is an infection of the lymphatic system only; (*b*) because directly the poison begins to act on the intestinal walls *B. coli* becomes pathogenic, and increases so enormously as to obliterate other forms.

6. Given the grave toxic anatomical changes of the intestinal mucous membrane, the *B. coli* constitutes the first

cause of the secondary infections and local izations so frequent in the disease.

7. If the animal is partially vaccinated the *B. coli* in the intestine produces only local effects.

8. Animals vaccinated against Eberth's bacillus are also vaccinated against *B. coli*.

Dr. William Goodell.

Dr. William Goodell, the eminent gynæcologist, who had been in failing health for the last two years, died at his residence, 1418 Spruce Street, on Saturday morning, aged 65 years.

Dr. Goodell was the son of the Rev. Wm. Goodell, D.D., of Holden, Mass., and was born on the island of Malta while his parents were journeying to Turkey, where his father was engaged in missionary work.

In 1849 he entered Williams College, Massachusetts. Graduating three years later, he came to Philadelphia and continued his studies at the Jefferson Medical College, and received his diploma in 1854. The same year Dr. Goodell rejoined his father in Constantinople, and there entered upon the practice of his profession. In 1857 he married, at Smyrna, Asia Minor, Caroline, daughter of the late Judge Thomas S. Bell, of West Chester, Pa., who survives him. In 1861 he returned to America on account of the unsettled condition of political affairs in Turkey, and, locating in West Chester, there commenced practicing medicine in this country.

Dr. Goodell made a specialty of obstetrics and diseases of women, on the subject of which he was a prolific contributor to the medical journals, and was also the author of "Lessons in Gynæcology."

In 1865, on his appointment as Physician in Charge of the Preston Retreat, at Twentieth and Hamilton Streets, he came to reside permanently in this city, and continued to hold this appointment until 1887.

In 1870 he was appointed Lecturer on Obstetrics and Diseases of Women of the University of Pennsylvania, and in 1874 Clinical Professor of the University of the Diseases of Women and Children. He was also Honorary Professor of Gynæcology of the University, a member of the National, State and County Medical Associations, of the College of Physicians, of the American Philosophical and American Pathological Societies, and a correspondent of the Boston Gynæcological Society, of the London Obstetrical Society and of the Imperial Medical Society of Constantinople.

Congenital Constipation.

F. Huber reported the case of a boy, five weeks of age, who since birth had been troubled with constipation and colic. When first seen by the author he was suffering great pain, straining and kicking. The abdomen was swollen and tympanic and the child had been vomiting for two days. The temperature was 102°. By process of elimination a diagnosis of acute intestinal obstruction since birth was arrived at. It was due to an impaction of fæces in the reduplication of the sigmoid flexure of the colon, a condition frequently misunderstood or entirely overlooked. While in many cases it was a very trivial matter, still it was not uncommon for it to lead to serious illness and even to seriously jeopardize life. In infancy the descending portion of the colon was disproportionately long, and by being crowded down into the narrow pelvis it formed a number of curvatures instead of one sigmoid flexure. The treatment consisted in giving high rectal injections until the proper relation had been established between the colon and the sigmoid flexure. It was, of course, often necessary to continue the treatment for years.—*Boston Med. and Surg. Jour.*

Treatment of Laryngeal Phthisis.

Dr. Hajek presented a patient with laryngeal tuberculosis upon whom he had tried a new treatment. The infiltration of the epiglottis was so great that the man could no longer swallow. Dr. Hajek removed the entire epiglottis by means of a galvano-caustic loop, and treated the wound with lactic acid. Four weeks later the patient was able to swallow with ease. Since then he had curetted one of the vocal cords which was ulcerated. This was also dressed with lactic acid and healed rapidly. It is now one year since the epiglottis was extirpated, and the cure is maintained. The patient has increased in weight 19 kilogrammes (38 pounds), proving that his general condition is better. Dr. Hajek stated that he had already extirpated the epiglottis of three patients.

ABSTRACTS.

PEPTONES.

It is commonly supposed that peptones must be the products of the action of pepsin on proteid and albuminoid substances. As a matter of fact, however, *true* peptones result from the fermentative activity of pancreatin. As will be seen by the pharmacopœial tests, under the respective headings, pepsin is active only in acid solution, pancreatin only in alkaline solution. There is one ferment, however, which is active in neutral solution, and this is papain, the so-called vegetable pepsin. A word as to the production of these various ferments. Pepsin, as is well known, is prepared by two general methods, producing "precipitated" and "soluble" pepsin, respectively. The former is prepared by exhausting the mucous membrane of the pig's stomach with water containing hydrochloric acid and precipitating with sodium chloride; the latter by macerating the mucous membrane in acidulated water and evaporating the resulting solution nearly to dryness, redissolving, precipitating the peptones formed by means of appropriate agents, evaporating and scaling. Pancreatin, or "trypsin," is mostly obtained by extraction of the pancreas with glycerin and precipitating with alcohol. Papain is obtained by expressing the fruit of carica papaya, diluting the resulting milky juice with water, allowing the resinous constituents to precipitate, filtering, and precipitating by means of alcohol.

"Peptones" are divided into the following four classes:

1. Pepsin-peptones. These are obtained by allowing gastric juice, or pepsin in acid solution, to act upon albuminous substances; these may be egg-albumen or the albuminoids in meat. When the previously coagulated albumen is entirely liquefied or rendered diffusible by the action of the pepsin, the product is called albumose, which is considered to be nothing more than a hydration product of albumen. Its advantages over albumen are its greater solubility, easier diffusibility and its non-coagulation by heat. The majority of true pepsin-"peptones" are made, however, by allowing pepsin in acid solution or gastric juice to act on fresh beef previously freed from fat and sinews for 12 hours at a temperature of 150° C. (22° F.). After cooling the liquid is filtered through a moist filter to retain all fat, tested with nitric acid for unconverted albumen, neutralized with sodium carbonate and concentrated in vacuo or on the water-bath either to syrupy consistence or to dryness.

2. Pancreas-peptones. These are the *true* peptones. They may be obtained by acting on albuminous substances with pancreatin in alkaline solution (sodium carbonate or calcium hydrate), otherwise proceeding precisely as stated under pepsin-peptones. The action of pancreatin, or "trypsin," is accompanied by deeper-reaching changes than that of pepsin, such products as leucin, tyrosin, etc., being formed. The pancreatin-peptones possess a far more disagreeable taste than the pepsin-peptones or albumoses and are also inferior in keeping-power.

3. Peptones from vegetable pepsin. These are now produced in not inconsiderable quantities by allowing papain to act on meat. The juice of the agave or century-plant, as well as that of the pineapple and American pawpaw, also comes within the realm of vegetable pepsin. These peptones, however, have long been regarded not as true peptones but as identical with the next and last group.

4. "Meat solutions," obtained by superheated steam. Under this heading we may also include those solutions which are obtained by the action of boiling water+hydrochloric acid on meat. To prepare such peptones meat, previously freed from sinews and fat and finely comminuted, is placed into cold water contained in a vessel fitted with a nearly air-tight cover and a false bottom to prevent the meat from burning. The water may contain 2 per cent. of hydrochloric acid or not; but the addition of the acid will shorten the process. After boiling for 10 to 15 hours, removing from the fire, rubbing in a mortar to an emulsion-like consistence,

and boiling for another 15 to 20 hours, the resulting liquid will contain true albumoses and peptones, although not consisting entirely of such, since not all of the albumen is converted by the heat. Here is a field that offers good returns in more senses than one to the pharmacist. In view of the fact that the market is flooded with so many "peptones" and "solutions of peptones," some of which depend more upon the wine and coca than upon the presence of any real peptone, and that they often produce imaginary rather than real results, the pharmacist should prepare his own peptones and introduce them to the notice of the physicians with whom he comes in contact, explaining to them that peptones are exceedingly prone to decomposition, and that therefore they cannot reasonably be expected to keep for any considerable time.

To show the physician how he may in from 4 to 12 hours' time, by digesting 1,000 grams of prime beef with about 10 grams of pepsin, 40 cubic centimeters of hydrochloric acid, and sufficient water, produce about 250 grams of peptone, representing in a soluble and predigested form the 1,000 grams of beef, should thoroughly convince him that reliable peptones can be furnished by the pharmacists. Care should always be taken, however, to neutralize the free acid by means of sodium carbonate.

By a little experimenting the pharmacist may for himself find out the best methods and manipulations for producing peptones, *true* peptones, which will give good results, and which are, in addition, more profitable to sell than the proprietary articles of commerce.

In conclusion it may be said that the true peptones, or those produced by pancreatin, seem to possess not any more nutritive value than the albumoses, or the "peptones" produced by pepsin. Either of these possesses a very disagreeable taste, and, as before mentioned, will not keep very long. The taste of the solution must therefore be corrected, either by salt and pepper or, preferably, by a quantity of beef extract. It may sometimes be indicated that the so-called meat alkaloids or bases (syntonin, etc.), also the salts (potassium phosphate, etc.), should be removed. In that case the meat to be acted on must be extracted with boiling water previous to subjecting it to the action of the ferment. The solution may be evaporated and again added to the peptones, if necessary, in part or in whole. As peptones are soluble in wine, syrup or hot water they can be made palatable as well as nutritious, and also—remunerative.—*Western Druggist.*

PATHOLOGY OF PNEUMONIA.

Dr. F. O. Broady, in *Sanative Medicine*, says: Whatever the cause may be, the disease begins with a recession of the blood from the surface, or the capillaries of the skin, and a predisposition of an unusually large blood mass to accumulate in the lung capillaries. Any sudden chilling of the surface with a corresponding deficiency of tension or tone of the lung capillaries will produce this condition, on the principle that a fluid will find the point of least resistance. An increase of blood in any part of the body will lead to an inflammatory condition there, in which expression the idea of softening of normal tissue is involved, and this softening takes place very rapidly; in fact it begins at once, whether the walls of the lung capillaries are weaker than usual either on account of the youth of the patient or because of the poisons, as alcohol previously taken, or whether they are not previously weakened. In either case it will not take long before this inflammatory softening causes the vessel walls to give way at some point, slightly at first, perhaps not more than enough to permit serum to filter through without the red corpuscles, but as the process goes on, even these corpuscles find openings large enough to escape, and the air-cell rapidly fills up with exuded blood material. We now have the stage of red hepatization. The effusion of all this matter is a most fortunate thing, however, and is perhaps the only chance the patient has for his life, for the air-cells are not only filled, but also *distended* by the escaping blood. The result of this distention is to press on the blood-vessels in that immediate neighborhood, and this outside pressure furnishes the tone to the vessel walls that was lacking, and the heart can

no longer send such an excessive amount of blood to parts that now are not so atonic, but must find room for it in another region of the body. The pressure from without on the blood-vessels also, of course, has a tendency to check the escape of blood-elements. If the air-cells were only filled and not distended, we would have a condition in which the exuded blood-elements would have a regular supply of food furnished through the breaks in the vessel walls, and through this regularity of food supply would increase and then form new tissue: this to the utter destruction of any hope of ever getting the air-cell clear again from foreign matter in order that it may perform the function for which it was intended. This condition, or one very similar, does actually exist in interstitial or chronic pneumonia. The distention, then, of the air-cells by the exuded blood-elements is fortunately great, and it is also sudden, which is also fortunate. This rapid and great distention leads to a rapid and considerable shutting off of the previously existing food supply (found in the blood) to the tissue germs already found in the air-cell, and here, as everywhere else, a considerable and rapid limitation of the food supply to a part leads to fatty and other disorganizing degenerations.

We now have arrived at the stage of "gray hepatization." When a cell undergoes fatty degeneration it increases in size, and, hence, this results in still greater distention of the air-cells, which leads to a still greater limitation of the food supply to the part, and which naturally produces a more sure and rapid fatty degeneration. It is necessary to have this fatty change in the exuded material, because this is the only state in which it can be consumed by the white blood corpuscles which swarm wherever an injury has taken place, consume the *débris* and reënter the circulation when the destruction has been repaired. The organism has to depend on these corpuscles to repair the pneumonic injury and carry off the exuded blood and tissue elements, for these cannot be coughed up: nothing can be coughed up behind which a considerable quantity of air cannot get.

CERVICAL GANGLION OF THE UTERUS.

BYRON ROBINSON, M.D.

It would astonish any student to know how little has been published in regard to the nervous system of the female genitals which is of an original character. The reason for this is at once apparent when one pursues the study for several years. Of course the simplest and easiest way is to dissect the genitals of man and animals. But few do that. And, besides, to dissect with value and discrimination requires time, experience and patience. The best way is to secure an infant cadaver and drop it in alcohol for several weeks, and for comparison secure some six to eight weeks' fœtal pigs from the slaughter-house and treat them likewise.

To get at the parts most readily, open the infant's abdomen and take away the hip-bone. Unjoint it at the sacro-iliac joint, then cut it away at the tip of the ischial spine, and then saw through the pubic rami at the center of the obturator foramen. The field is now clear. Next, observe the course of the hypogastric plexus just beneath the peritoneum at the promontory of the sacrum. It will show itself like white threads shining through the peritoneum. The white lines are the hypogastric plexus and should be carefully followed by a sharp-pointed scissors as far as the region of the cervix. Now, with gentle care, clear away the various tissues from the roots of the first, second, third and fourth sacral nerves. It will by this time be clear to the sight that the lower end of the hypogastric plexus and the branches from the sacral nerves (especially the third and fourth) converge near the cervix into a mass of white tissue. This mass of whitish-gray tissue is the ganglion of the cervix uteri. So far as I can ascertain, this ganglion was first described by a physician named Walter. The existence of the ganglion has been denied by Snowbeck, of the English, and by Kilian, of the French. The defenders of the ganglion are chiefly Lee (1842) and Frankenhausen (1867). The names of

those who have worked at this ganglion are very few even to this day. The only worker on this ganglion that I know of in the last generation is Dr. Jastrobef, of St. Petersburg, in the clinic of Professor Slavjansky. Dr. Jastrobef used thirty bodies to secure anatomical and pathological knowledge. I have been working at the nervous system of the female genitals for some five years, and I did not become aware of Dr. Jastrobef's labors until August, 1894. Nearly every worker in this subject comes to essentially the same conclusions, but some little manifestations arise which induce said observer to think every other investigator overlooked. Lee and Frankenhauser showed with anatomical positiveness the largeness and solidity of the cervical ganglion, while Snowbeck and Kilian tried to belittle its size and even its existence. Jastrobef's short account simply sides with the idea that the cervical ganglion is a mere plexus of nerves.

After careful dissecting (man and animals) I must say that the cervical ganglion is a veritable ganglion, just as the superior cervical ganglion is. The cervical ganglion is a real ganglion. It is true it varies in shape and size, as all sympathetic ganglia do, but it is constant and real. I shall carry on this investigation for the next few years in man and animals and prove its constancy. The last cadaver which I dissected for the purpose of identifying the ganglia for study was that of a woman about seventy years old. The ganglion was fully three-fourths of an inch long and over one-fourth of an inch wide. It was a thick, hard, irregularly shaped mass of nerve-tissue receiving the hypogastric plexuses and the branches of the sacral nerves and sending out many small nerves to the uterus, bladder and rectum. The ganglion in this special case received all the branches of the sacral nerves before they entered the uterus and all the nerves of the hypogastric plexus, except two or three, before they were sent to the uterus. It appears, then, that the cervical ganglion is the distributor of nerves to the uterus. It is no doubt the ganglion of the uterus. Its business is to control the uterus. Leashes of nerves start out of this ganglia to the uterus, bladder and vagina. The vagina was, next to the uterus, the favored organ for numerous strands. The ganglia lie near the cervix, one on each side. In the above case the right cervical ganglion was much more solid and compact than the left. More than a dozen branches could be counted going to the uterus, to the vagina and to the rectum, in the order of abundance. In this case of a woman seventy years of age the ganglion was perfect and distinct, as it is in an infant cadaver. The wonderfully intimate nervous connection of the uterus to both rectum and bladder should be a lesson to the gynecologist. The uterus, rectum and bladder are richly supplied by many strands from the same great trunk (hypogastric plexus). It is almost impossible to irritate one organ without the other two being brought directly into the disturbed field.

During the last five years I have had many subjects (man and animals) to study the sympathetic nervous system, and one fact has time and time again impressed me. This fact is the widespread and profoundly intimate nervous connection of the kidney and genitals. So far as the nerve connection is concerned the organs should be written genito-urinary, with a distinct hyphen. The explanation arises in embryology, where both genital and urinary organs arise from the same source —the Wolfian body. I wish to give credit for this same idea to Dr. Frankenhauser, whose work I was able to secure only a few months ago, as it is out of print. A glance at a well-dissected sympathetic nervous system lying *in situ* would enable a physician to cast aside forever an error long propagated in obstetrics, and to my own knowledge taught even to this day from obstetric chairs. It concerns pressure over the sacral promontory to stop post-partum hemorrhage. It is taught that pressure compresses the aorta so that the blood is checked from going to the uterus. A few actual trials in obstructing the aorta by pressure will soon dispel the delusion. The facts in the case are that the irritation of the hypogastric plexus (in attempting to compress the aorta) induces the uterus to contract. The more pressure and vigorous irritation applied to the sacral promontory the more vigorous and certain will be the uterine contractions, so that the explanation of how post-partum hemorrhage is checked by compressing the aorta is certainly wrong. The mechanism is accomplished by the irritation of th hypogastric plexus. So far I have no had the opportunity of dissecting a preg

nant uterus, to determine whether the cervical ganglia enlarge, but both Lee and Frankenhauser say they do. It is probable, however, that John Hunter is correct in his suggestion that it is the connective tissue, and not the nerves themselves, which enlarges in pregnancy. Almost every investigator of the uterine nerves has come to the opinion that it is the infant cadaver which serves the best purpose. The nervous system of the infant is disproportionately large and is plain to the eye, and it can easily be separated from the delicate connective tissue. The cervical ganglia are very plain in the infant. Two to four nerve-branches pass along with the ovarian vein and artery to the ovaries. At the junction of the tube and uterus (*i.e.*, at the origin of the round ligament) the ovarian and uterine nerves join—anastomose. The cervical ganglion, of course, shrinks after the menopause, but its shrinkage must be limited, as many of its branches supply the rectum and bladder, organs which persist in further use. Yet it appears to me that the rectum and bladder in old female cadavers are considerably atrophied as well as the uterus.

Jastrobef in his short article notes that in disease of the genitals on one side the ganglion of the same side is affected. He reports two cases where the ganglion and the genitals of the same side were both diseased. As a considerable portion of the cervical ganglia rests on the vagina, even total extirpation of the uterus would include but a very small part of the ganglia, for the cervical ganglia are situated too low down to be included in the extirpated uterus. These few remarks may call attention to the cervical ganglion of the uterus, its limited literature, the varied opinions as to its existence, shape and size, as well as the slight records of its functions and pathology.—*Med. Rec.*

THE INHALATION OF OXYGEN IN OPIUM-POISONING.

The usefulness of potassium permanganate as an antidote in the treatment of opium-poisoning may, in view of the evidence presented, be admitted. Upon what this antagonistic action depends has, however, not yet been demonstrated, though it is reasonable to assume that the oxidizing quality of the potassium salt plays a prominent role in this connection. This supposition would, in some measure at least, seem to be supported by the fact that the permanganate has also proved useful in the treatment of phosphorus-poisoning, cyanid-poisoning, and snake-bite. Further confirmation of this view appears to be afforded by the recent experience of Merry (*Lancet*, No. 3,692, p. 1372), who reports a desperate case of opium-poisoning in which inhalations of oxygen seemed to act as the determining factor in bringing about recovery. The victim, a male, thirty-two years old, had, three hours before coming under observation, taken of a preparation of variable composition an amount supposed to represent eight grains of morphine. The man was unconscious, cyanotic, and breathing stertorously about fifteen times per minute. The corneal reflex was abolished, and the pupils were small and inactive. Flagellation, cold affusion, the use of the interrupted current, the vapor of strong ammonia, the subcutaneous injections of ether failed to bring about reaction. The respirations were labored and had fallen to eight per minute, and the pulse had become almost imperceptible. The cyanosis suggested the use of inhalations of oxygen, and these were forthwith instituted, pure, undiluted gas being employed. In the course of twenty minutes the face had regained its normal color, the respirations were fuller, easier, and more frequent, and the pulse had become perceptible and regular. The patient was still stupid, although there was a slight response to corneal irritation. After an interval of half an hour the inhalation of the gas was resumed, with further marked benefit. Consciousness returned, and after the repetition twice of the inhalations after intervals of three-quarters of an hour, the point of danger seemed to have been passed. The man remained drowsy during the day, but did not relapse into stupor. He made a perfect recovery. The suggestiveness of this experience is entirely obvious, and the safety and innocuousness of the method must surely commend it to favorable consideration and intelligent trial in suitable cases.—*Medical News.*

PRIMITIVE MAN.

From a geological point of view the Human Period comes so late in the history of the building up of the crust of the earth, so late in the long succession of animal life, that its date must be referred to the rocks now in process of formation. One of the few things, indeed, which carries the early part of the Human Period back beyond our present associations is that there lived in what we are wont to call the beginning, coeval with man, many animals which are now extinct. We may fairly assume that the relics of primeval man which it has been the good fortune of the geologist to discover did not belong to the lowest type of humanity. Primeval man in the true meaning of the term must have been a creature of considerably lower cranial development than any hitherto discovered, for some skulls are about equal to, while others show a considerably higher brain capacity than, many of the lowest modern savages. The fact that there are now living in the world creatures of our own race whose cranial capacity and conformation places them on a level with, or lower than, the earliest discovered man, is of great interest; for if we assume—and this may be done without great error—that the lowest of these ancient skulls is a fair representative of the development of the age in which its possessor lived, then we arrive at the mental capabilities of the inhabitants of Europe in those days by observing people of similar development in the present day.

Prior to the commencement of the last Glacial Period there is no proof of the existence of man. The climate of Northern Europe could not, however, have been the cause of his non-appearance; for if we may judge from the remains of the flora underlying the glacial drift, and immediately above the chalk near Cromer, it must have been congenial to a form of vegetation similar to that of the present day. Strange, indeed, does it appear that among these relics of the age immediately preceding the last Glacial Period we have no trace of the existence of man; but whether he had not then come into existence, or was in those days one of the rarer species of mammalia, cannot be positively affirmed. Certain it is, however, that in the first discovered specimens man had attained a comparatively high state of development, and that there was nothing in the climate of the period immediately preceding the last time when Northern Europe was enveloped in sheets of ice which could prevent his living comfortably on our shores, for we know that the geographical distribution of our race is infinitely greater than that of plants, mollusks, and the mammals immediately below us in organization. Those who hold the doctrine of development in any form cannot suppose that man was introduced on to the earth at that stage in which we first find his remains. The search must be made considerably earlier if primeval man is to be discovered, not necessarily in Northern Europe, or even the northern hemisphere, but more probably in those strata which in a more temperate climate were in course of formation during the last Glacial Period in our country.

During that great age of ice, Northern Europe was quite as uninhabitable as the middle of Greenland is at the present day. So great was the accumulation of ice and snow that at times it buried the highest mountains in England and Scotland to a depth of two or three hundred feet, completely filling the bed of the North Sea, and thus joining the British Isles to Scandinavia, Germany and France. Westward, the vast ice-sea crept away far out into the Atlantic, for miles grinding along the bottom of the ocean, till the water became sufficiently deep to enable it to float. The terminals, like those of existing ice-sheets in the far North and in the glaciated regions of the South, formed immense cliffs, standing hundreds of feet in height, from which every now and again massive icebergs would break away, and, sailing southward, would gradually melt as they reached the warmer air and water between the fortieth parallel and the Tropic of Cancer. That this country, as well as the rest of Northern Europe, has been enveloped in a vast ice-sheet is so well established a fact that it hardly seems necessary to recall evidence on the subject. It may readily be conceived that when the last Glacial Period came on, in place of the mild climate which preceded it, it would change the aspect of the country as completely in the animal as in the vege-

table world. But after this age of intense cold had last for thousands of years, the winters again became shorter, and the summer sun reclaimed first a coast line, and, having thus obtained a more congenial element on which to expend his warmth, drove back the ice-sheets inch by inch into the fastnesses of the hills. Ocean currents depressed into the southern hemisphere now poured tepid waters into the northern seas, which rapidly dispelled the sheets of floating ice, and, as they played upon the shores of Europe, aided to a great extent the other causes which have brought about the climate we now enjoy.—*Public Opinion.*

THE BACTERIOLOGICAL DIAGNOSIS OF DIPHTHERIA.

Since the publication in the *British Medical Journal* of August 18th of the important communication by Dr. Hermann Biggs regarding the bacteriological diagnosis of diphtheria, the general press has repeatedly referred to the subject. It must not, however, be imagined that London has been absolutely supine in the matter. The report of the medical officer to the Local Government Board for 1891–92 contained a report by Dr. Klein showing that by bacteriological investigation the cases in which scarlet fever was complicated with membranous sore throat could be divided into two classes, one of which was truly diphtheritic and the other was not, with this general result, confirming what had been discovered before, that membrane occurring in the early days of scarlet fever was not diphtherial, whereas that which came on in the later stages and in convalescence was true diphtheria. On March 15th of this year a paper was read before the Medical Society by Dr. Wethered, on the "Diagnosis of Diphtheria by Bacteriological Cultures," giving details of the process and its results. The medical officers of the hospitals of the Asylums Board have endeavored to differentiate the mass of membranous throats coming before them into the true and the false types. In the report of the Statistical Committee for 1893 mention is made of certain bacteriological investigations having been undertaken. Some of the results were reported to the Clinical Society by Drs. Washbourn and Goodall on January 12th, and more lately the method has been largely used at the South-Eastern Hospital by Dr. Thomson. No doubt the pathologists at the various general hospitals have also carried out investigations on the same lines but on a smaller scale, and the Clinical Research Association, the institution of which we noticed last week, is ready, for a small fee, to examine membrane forwarded to it and report by telegram. What, however, has not been done, we believe anywhere except New York, is to create a municipal organization by which, as part of the ordinary sanitary machinery of the health department, the bacteriological diagnosis of diphtheria shall be put at the disposal of the profession. The organization there is so complete and its efficiency is so highly spoken of by Dr. Hermann Biggs that we cannot but hope that some county council, preferably that of London, will take the matter up in the same spirit. The culture tubes would be stored at numerous depots, probably the vestry offices. All that the doctors would have to do would be to obtain the tube, inoculate it by means of a sterilized swab supplied in a separate tube along with the culture medium, replace the cotton plug, and return the tube to the depot. At a certain hour every afternoon these tubes would be collected from all the stations, and taken to the central laboratory, where by noon the next day the diagnosis would be ready to be dispatched by letter or telegram, according to the urgency of the case. The importance of the matter is greatly increased by the assertion of Dr. Biggs, in which he merely confirms the observations of Prudden and Baginsky, that a very large number of cases of membranous sore throat are not due to the bacillus of diphtheria, but merely to ordinary cocci, and that the mortality of such cases is practically *nil*. In New York they do not accept these non-bacillary cases at the hospitals, and on the other hand they do not discharge cases of true diphtheria until bacilli cease to be found, sometimes not for several weeks. When the tubes are prepared wholesale the expense is said not to be great, and probably as an experiment the bacteriological work would be undertaken by an existing laboratory.

EPIDEMIC MUSCULAR RHEUMATISM.

Dr. Isaac Newton (Tonbridge, Kent) sends the following note on an affection which has appeared in Kent recently:

I have seen a comparatively large number of cases (43) of acute muscular rheumatism during the last five weeks, all presenting an extraordinary similarity, so much so that I was able confidently to predict the exact course that any individual case would take. I have seen no record or description of anything of this nature occurring in such an epidemic form. It comes on suddenly, and is characterized by pain, increasing in intensity for a few hours until it reaches its maximum, situated in and affecting the abdominal and lower intercostal muscles, rendering breathing painful, short and rapid, not infrequently also affecting the muscles of the back, especially in the lumbar and upper sacral regions. It is accompanied by a rise of temperature, ranging from 100° F. to 104° F., according to the severity of the attack, with its usual concomitant effects of headache, injected conjunctivæ and furred tongue. The pulse remains comparatively slow, 80 to 90 beats a minute, occasionally 100. The patient perspires more or less profusely, giving off the peculiar acid odor of a rheumatic affection. There is no vomiting, feeling of nausea or other gastro-intestinal disturbance. If treated with such drugs as quinine, acetate of ammonia or sweet spirits of niter, or if it be left untreated, it runs a course of about three or four days, the pain and fever gradually abating on the second or third day. In two cases it was accompanied on the second day by acute endocarditis

I look upon it as entirely distinct from influenza, which it resembles, and as having a rheumatic origin, for the following reasons:

1. Although I have seen such a considerable number of cases during the last few weeks, I have not had a single case of any of the recognized varieties of influenza.

2. It is not followed by any of the marked depression or weakness so characteristic of influenza.

3. It is peculiarly amenable to treatment: 10-grain doses of salicylate of soda together with 15 grains of bicarbonate of potash administered every four hours invariably brought down the temperature in from six to twelve hours. This combination of drugs has, so far as I know, no such specific effect in influenza.

4. If infectious, it is very slightly so; as, of all the cases observed, in only one instance has more than one member of the same household been affected. (A servant had it, then in exactly seven days the wife and seven days later the husband were attacked.) I conclude that it is not infectious, a strong contrast to influenza.

5. There has been no complication or affection of either lungs, air-passages or nasal cavity concurrent with or as a sequel to it in any single case.

6. Lastly, and not least, the heart complication points strongly to a rheumatic origin.

Example.—G. J., aged 32, was taken with acute pains in the abdomen and in the lower intercostal region on the afternoon of August 4th. That evening I found him in bed, with difficulty of breathing owing to the affection of the lower intercostal muscles on both sides; pulse 92; temperature 103.4° F. He was perspiring profusely, the acid odor of the perspiration being well marked. The heart-sounds were normal, and nothing abnormal was to be found in the lungs. I prescribed the following:

℞

Sodii salicylatis	5j.
Potassii bicarbonatis	3j.
Liquor opii sedativi	3ss.
Spiriti chloroformi	3jss.
Aquam ad	3viij.

One-sixth part every four hours.

I saw him twelve hours later, and found that all pain had ceased after taking two doses; the temperature was 98.4° F. The patient was practically well. He got up that afternoon, and I put him upon an alkaline and gentian tonic. On August 6th he returned to work; he has since felt no return of the pain, and has been perfectly well. This tallies exactly with and might be an exact description of all the other cases so treated.

The cases above mentioned of heart complication occurred before I had discovered the specific effect produced by salicylate of soda and bicarbonate of potash. There was no valvular disease in them previous to the attack. Only a few weeks before I had both these patients

under notice; the condition of their hearts was noted accurately, and there was no trace of any cardiac murmur or trouble to be made out then. I attribute these attacks to the exceedingly wet summer that we have experienced this year. This district lies especially low in the valley of the Medway.—*British Med. Jour.*

HEMORRHOIDS.

In complaints of rectal troubles, make diagnosis before you prescribe. If piles, discover what kind, whether external or internal, bleeding or not bleeding, protruding or not protruding. External, inflamed piles require, in a degree, the same treatment as internal; yet the external require an astringent which the internal cannot bear. Bleeding piles need different treatment from those that do not bleed, and protruding piles special treatment, especially if they resist reduction. External piles are of two varieties: (1) external tags of skin; (2) venous tumors. External tags of skin, when inflamed, constitute one of the most painful varieties of piles. An ordinary prescription can do but little good. Ointments cannot be absorbed. The application of heat or cold is productive of more positive results. Use flaxseed poultices or cloths wrung out of hot water and changed often. If heat is unpleasant to the part, apply very cold water in the same way. If an astringent is necessary, make solution of sugar of lead; bowels should be moved daily, salines as good as any. An injection of a quart of cold water will afford some relief. A radical cure consists in the removal of the tumor. Never try to push tumor inside of the rectum. The treatment of internal piles is different from the class just cited. The danger from this class is hemorrhage or strangulation; either may endanger life. An indiscriminate prescription of an ointment accomplishes nothing. Far better is an application of cold water when not protruded. An injection of cold water when not protruded but painful gives more comfort than all the combination of ointments usually prescribed. If, when the person who is troubled with the protrusion of internal piles is directed to take a cold-water injection every morning to move the bowels, to bathe the pile tumor in cold water after an evacuation, anoint the mass with plain vaseline, then push it back, and under no circumstances to use paper as a detergent, much comfort will be gotten out of these directions.

If internal piles both bleed and protrude, a little different treatment is used. The hemorrhage must be looked to. When protruding, an examination can be made, and if no bleeding points are found the following will be found good:

℞ Vaseline ..... 1 ounce.
Acetate lead ..... 20 grains.
Pulv. opii .. .. 15 grains.
Balsam Peru ..... 1 drachm.
M. Sig.: Apply to pile after washing with cold water.

If protruding external piles are accompanied with much pain, some complication exists; usually ulceration. Washing with hot water will be found more agreeable, to be followed by the following prescription, which contributes much to relief:

℞ Cocaine ..... 7 grains.
Extr. opii ..... 20 grains.
Extr. belladonnæ ..... 16 grains.
Lanoline ..... 1 ounce.
M. Sig.: Apply after washing. Then return mass.

At bed-time use the following suppository:

℞ Iodoform ..... 4 grains.
Morph. sulph ..... ½ grain.
M. ft. sup. No. 1. Sig.: Insert at bed-time.

Itching is often mistaken for piles; if itching is a most prominent symptom, it will most likely be found to be pruritis If with piles we have an itching of the surrounding parts, the following is suggested:

℞ Vaseline ..... 1 ounce.
Ichthyol ..... 1 drachm.
M. Sig.: Apply often.

—*Matthew's Med. Quarterly.*

RHINOLITHS: WITH CITATION OF A CASE.

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The semeiological factor of rhinolith is a purulent rhinorrhœa attended with fetor, the degree of which is proportionate to the length of time of lodgment and to the treatment. The treatment may be by either a domestic or a professional detergent. The diagnostic feature recounted may be accompanied, singly or jointly, with frontal, orbital and superior maxillary pain. These pains are not always caused by the obstructive nature of the mass damming the muco-purulent discharge due to inflammatory action and the physiological secretions from the nasal duct. The writer does not wish to claim that the pains are not due to retention of the secretions. He thinks that they are aggravated by the mass becoming firmer and larger, this predicament resulting in peripheral neuritis of the small nerve filaments ramifying over the nasal mucous membrane. The intermittent character of the pain, however, tends to disprove this assertion.

The analytical character of rhinoliths has been largely discussed, but rather unsatisfactorily. The chemical components, according to Demarquay and Bouchardat, consist of the phosphates and carbonates of lime and magnesia, with the chloride of sodium. The latter salt, according to investigation, appears in greater quantity when the rhinolith is in the inferior meatus, occluding the nasal duct. The secretion of the lachrymal glands is chiefly chloride of sodium, therefore the nucleus lodged in the inferior meatus, though small, but increasing in magnitude from the nasal secretions of mucus, fixed phosphate and carbonate of lime, together with a trace of amorphous fats, would be an incentive for the sodium chloride to unite and form a chemical compound of these salines. On the contrary, when the nucleus is in the middle meatus the nasal duct is not occluded unless the rhinolith attains a very large size. Consequently position has considerable influence as to the chemical nature of a rhinolith.

The gouty diathesis is the sole explanation of a rhinolith occurring spontaneously, and in my observation this can only be accounted for by calcareous degeneration, according to the theories of Virchow and Kölliker. These atheromatous conditions usually result in renal calculi or bladder masses. Let me add that a chronic ulcerative inflammation upon the turbinated bones would also produce this condition, but it is rare to see chronic ulcers with cheesy deposits in this region.

McBride speaks of "clots" as forming a nucleus for rhinoliths. A statistical list of this class is not obtainable at present, but it would be interesting to know to what degree epistaxis is directly the cause of rhinolith. From my own observation it is infrequent.

Masses of necrosed bone is responsible for many rhinoliths. These bodies usually form in the accessory cavities—antrum, frontal sinuses, ethmoidal and, rarely, spheroidal cells. From these cavities they find their way into the nose. The aged suffer from this causal factor more than do the young.

Inspissated material is also given a place as a nucleus. But, then, there must be an atrophic condition previous to development of rhinolith. In this category may be mentioned Virchow's process of calcification in disintegrated and cheesy tissue. The author would favor the latter views more readily than the former, since the presence of desiccated mucus is only coincidental. Facts prove that rhinoliths are connected with a hypertrophic rather than an atrophic rhinitis, due unquestionably to the alert and speedy diagnostician, who discovers the foreign mass before it is allowed to develop atrophy. Several cases, however, are on record where the rhinolith was in active accumulation for ten years. I myself have been fortunate enough to see one of nine years' standing.

The size of these extraneous masses varies according to the nuclei and the time length of development; also to the activity of the secretory powers of the patient.

The most likely causal factor—in fact, despite the contention of some authorities, it should be termed to-day *the causation*—is a foreign body. These foreign bodies consist of every conceivable article that

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can be thrust into the nose, from the time the creeping child knows that he has this organ until the freakish pranks of adolescence are passed. Such are beads, beans, shoe-buttons, and a prime favorite among small children are cherry-stones; also may be mentioned the small pebble found on the sand beaches of the fashionable watering resorts.

The nucleus determines the size entirely, for the coating of saline is very slight, even in cases of long standing, not exceeding a covering of two to four millimeters in a decade. But this shell-like covering or coating is not uniform in thickness, for sometimes from the outside of the nucleus to the top of the rhinolith the measurement equals two centimeters. Of course this occurs when the mass is spiculated, and is in reality the measurement of the spicula. Sometimes rhinoliths have attained unusual size. Seiler reports a case in which the length measurement was $3\frac{1}{2}$ inches and the width $\frac{3}{4}$ of an inch, weighing in all 46 grains. Unfortunately a lithotrite was used to extract this calcareous body and consequently, or in all probability, the nucleus was lost. Some years ago a case was reported by Ashhurst, of the University of Pennsylvania, the weight of the extracted mass being one ounce. Lithotrites, while of absolute necessity in extracting and crushing bodies of large size, are responsible for the deficiency in literature on the subject of rhinoliths; and as a consequence the exact origin is also obliterated, especially if the etiological factor is a nucleus.

The shape of a rhinolith, according to my observation, is entirely dependent upon the nucleus and the position that this foreign body has assumed within the lumen of the nose. For instance, if the nucleus lodges in the inferior meatus, the calcareous mass increases in its spheroidal limits, according to the cast—foreign body—over which the mass is forming, with spicula extending between the inferior surface of the inferior turbinated and the inner surface of the mucous membrane of the superior maxillary bone. Naturally, the molding is modified by the anatomical condition of the internal structure of this organ.

When the nucleus is lodged in the middle meatus the nasal calculus is of a triangular formation, in appearance much like a stellated body, as the spicula projects laterally between the superior margin of the inferior turbinated and the inferior anterior margin of the middle turbinated respectively and posteriorly downward toward the floor of the nose, while a solid calcareous mass usually fills the olfactory cleft. As to the formation of nasal calculi in the accessory cavities, their shapes are rather vague and undoubtedly disguised by assuming, finally, a position in the nasal lumen.

The symptomatology of rhinoliths, as observed by most clinicians, is the usual fetid, sanguineous and unilateral discharge. Double rhinolith is extremely rare. There is no dyscrasia, though I have seen a case of the latter sort, which I will remark later. Pains, if there are any, are as a rule frontal or orbital. Hemorrhage of the nose is not infrequent.

An interesting case is recorded at the Medico-Chirurgical Hospital. The case presented itself to Dr. Arthur H. Cleveland for inspection. The usual prime symptom was uppermost—a fetid discharge from the right nostril accompanied with pain referred to the frontal region.

L. R., age fourteen years; suffering from a catarrhal affection of the right nostril for nine years. The affection was noticed by the mother when the child was five years of age. The probe gave the hard metallic ring upon sounding, thus satisfying the operator that it was not a sequestrum. Further inspection and washing brought to light a well-formed and large-sized calculus, perhaps one and one-half decimeters in diameter, which was removed with little difficulty and was followed by slight hemorrhage. The calculus was a splendid specimen of the spiculated order. The nucleus was found to be a cherry-stone, the result of a childish prank. The dyscrasia which appeared in this case was, I think, due to the irritability and peevishness of the patient—a result of the constant frontal pain. There was some discoloration of the skin covering the angle of the jaws; the nose, which was markedly platyrrhine, was somewhat discolored. A complete recovery followed the extraction.

Signs of the Times.

A man is lingering at the gate—
Some tramp or burglar, maybe;
Oh, no, he is a candidate—
He wants to kiss the baby.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISON J. MORRIS, M.D., AND SAMUEL M. WILSON, M.D.

THE AMERICAN JOURNAL OF OBSTETRICS

for October. Dr. George H. Rohe, of Catonsville, Md., contributes a paper on

Intestinal Obstruction Following Operations in which the Peritoneal Cavity is Opened.

Obstruction of the bowels causes between 1 and 2 per cent. of the deaths following ovariotomy and other operations involving opening of the peritoneal cavity. The author states that he has been able to collect in the literature and from personal communications no fewer than 75 deaths from this cause. He divides secondary or post-operative intestinal obstruction into two classes of cases, one due to mechanical causes—adhesions, peritoneal bands, volvulus, accidental fixation by sutures, etc., and perhaps compression in exudation masses—and another due to paralysis of peristaltic movement of the intestines following sepsis or injury to the nerve supply of the muscular coat. The obstruction may be acute—*i.e.*, occur immediately after or within a few weeks subsequent to the operation—or it may develop gradually and not become complete until months or years afterward.

The majority of cases in which the cause of the obstruction was ascertained by operation during life or by necropsy, have been found to be due to abnormal fixation of the intestines by adhesions or to compression by peritoneal bands or cords inflammatory in origin. Any hindrance to the passage of the contents of the bowel at the point of flexure causes dilatation above and consequent increase of the degree of flexion. When this occurs there is at first increased peristalsis, but if the obstruction is not soon overcome the circulation is interfered with, dilatation of the bowel with paralysis of its walls follows, and the anatomical picture of the obstruction is complete.

Volvulus sometimes occurs after abdominal section, but probably only after some previous adhesion or constriction of the bowel.

There seems to be no question that by far the larger proportion of cases of post-operative intestinal obstruction are due to adhesions of the intestines to each other, to the abdominal walls, or to other viscera.

The symptoms are essentially the same as those of primary obstruction; but they are often marked by pain, vomiting and tympanites—so frequently present after abdominal operations without being significative of obstruction. Unless the obstruction is due to some untoward occurrence in the technique, the significant symptons are not likely to be present for several days subsequent to the operation. If a patient does well for three or four days or longer after an abdominal section or vaginal extirpation, and is then suddenly attacked by pain followed by vomiting, tympanites and inability to pass feces and flatus, the diagnosis of intestinal obstruction is probable. If the vomiting becomes fecal, the pulse rapid, the urine scanty, and symptoms of collapse set in, the diagnosis becomes reasonably certain. All these symptoms, however, are not uniformly present in obstruction. When the obstruction is high up in the small intestines fecal vomiting is usually absent and distention is likewise less marked. In these cases, also, the bowels may move several times after the pain begins, so that the diagnosis may be more or less uncertain.

An important point is the occurrence of local distention of the bowel above the point of occlusion in mechanical obstruction. This distention begins at the point of obstruction and extends upward along the course of the bowel. In mechanical obstruction, therefore, if the case can be observed from the beginning, there will be found an elastic swelling localized at a point of the abdomen and gradually enlarging, the direction of increase in size being along the course of the constricted bowel above the constriction. The distention is attributed to rapid decomposition of the arrested intestinal contents. Coincident with this local meteorism is an increased peristaltic movement of the bowel, also above the obstruction. In the later stages, particularly if septic peritonitis with paresis of the intestinal walls has occurred, these diagnostic signs are no longer available. In cases of obstruction due to paralysis of the intestine from the beginning (probably always a consequence of septic peritonitis) these symptoms are not present. Here there is a uniform globular distention of the abdomen without movement of the intestines, and without noticeable contours of the bowels through the abdominal walls.

An additional sign is furnished by the urinary reaction. It is claimed that in complete obstruction of the ileum there is always indican in the urine. In obstruction of the colon or high up in the small intestine this reaction is usually not present. The reaction is obtained by boiling a small quantity of the urine in a test-tube and adding nitric acid *guttatim*. The urine turns to a Burgundy-red color, and a similarly colored precipitate is thrown down. If urine yielding this reaction is shaken a violet-colored foam is produced. So long as this remains the case is a grave one. If, after operation for relief of the obstruction, the reaction persists, the obstruction has not been removed. In cases where the obstruction is relieved the reaction disappears within twenty-four hours. While this sign must be regarded as a very important one, it is not absolutely pathognomonic,

as a similar reaction occurs in some other morbid conditions.

The prognosis of primary intestinal obstruction is sufficiently grave. Following closely upon an operation so serious as abdominal section or vaginal extirpation of the uterus, this gravity is enormously increased. The abdominal surgeon should therefore be prepared to promptly recognize and appropriately treat this unwelcome complication. The knife is not always to be resorted to at once in the treatment of this condition, but when other means fail to give relief the surgeon should not hesitate to operate, as delay, in cases not otherwise curable, always increases the danger of operative measures. Cases occur where the symptoms may point to obstruction by means of adhesions, peritoneal bands or volvulus, and yet there is a possibility that there may be simply functional obstruction. In such cases other means may be tried until it is found that they are ineffective.

The author condemns the so-called "medical treatment" by means of opium or drastic purgatives. But certain procedures are frequently indicated, and though they are not often curative, certainly give temporary relief. Such measures are stomach-washing, rectal inflation of gas or air and injections of fluids. In stomach-washing some mild antiseptic lotion containing boric acid should be used. The lavage may be repeated every four to six hours as the vomiting or distention demands. The author also mentions the following method of Klotz: As soon as symptoms of obstruction appear the stomach is washed out with from four to six quarts of warm salt solution. Should this fail to relieve the symptoms it is repeated and a large dose (one and a half to two ounces) of castor oil is passed into the stomach through a tube. In all cases so treated by Klotz the active peristaltic movements set up caused passage of flatus and feces within ten hours. Evidently it is only in cases of fresh and friable adhesions that this method can be successful.

Rectal injections of water or air may at times be curative when the obstruction is due to intussusception, volvulus or to soft adhesions of the lower portion of the intestine, but where the obstruction is due to cords or bands they can manifestly be of no avail. They should therefore not be pushed beyond a reasonable trial. Care must be taken not to use too much pressure in making rectal injections, for fear of rupturing the bowel. Attempts to force the ileo-cecal valve must be regarded always as ill-advised. Too much care cannot be used in passing a rectal tube high up into the colon, as the author has seen one instance of perforation of the sigmoid flexure where this was attempted.

The rational treatment of intestinal obstruction following abdominal section is to reopen the abdomen, seek for the place of obstruction, relieve the same by separating adhesions, dividing constricting bands or untwisting a volvulus. If the gut is much distended an incision to let out the gas and fluid feces may be made and the bowel afterward carefully sutured. Gangrenous intestine must be resected and the ends joined by suture or Murphy's button. If the obstruction is due to a volvulus it would probably be always advisable to resect the twisted portion of the gut, as the volvulus is extremely likely to recur.

When practicable it is probably always best to make the incision in the middle line, as it permits more thorough and ready exploration of the abdominal cavity. Search should first be made for the obstruction in the iliac regions, as here obstruction is most likely to occur. If not found in either of the iliac fossæ and if it cannot be located by local distention, the entire length of the intestine must be passed through the fingers until the constriction is found. As it not infrequently happens that there is more than one point of constriction, the examination should be thorough.

The Relation of Hysteria to Structural Changes in the Uterus and its Adnexa

is discussed by Augustus P. Clarke, A.M., M.D., of Cambridge, Mass. From his own observation and experience gained in the treatment of cases of hysteria, the following propositions have been formulated:

That in the large proportion of cases of genuine hysteria there exists some distinct and tangible lesion of the uterus, appendages, or of parts immediately connected, and that the hysterical phenomena resulting from such organic disturbance will not yield until definite measures have been instituted for overcoming the original malady.

That in some cases the impoverishment of the blood and other constitutional influences may give rise to paroxysms of hysteria.

That these attacks are often transient, much more mild, and when properly treated by constitutional measures may disappear altogether.

That in those more obstinate cases of nervous perversion in which there may exist to a greater or less extent hyperesthesia, anesthesia, analgesia, and the like, the disease may not be necessarily dependent on factors giving rise to the disease in question, but may be of the nature of epilepsy or of insanity, or be dependent in whole or in part on morbid processes connected with some portion of the sensorium.

That the diagnosis of such cerebral lesions will be strengthened when, in the absence of a manifest organic disturbance of the genital tract, there is a history of a severe blow or injury to the head, or of influences or factors which have produced a profound or prolonged impression on the encephalic centers.

That in hysteria, on the other hand, none of these conditions exists; the phenomena are merely the result of reflex movements which occur for the most part during the period of the greatest activity of the organs of reproduction. That at such a time a seemingly limited amount of tumefaction, or an adhesion of a tube or ovary, or an adventitious change in the shape or relation of the uterus, is capable of effecting constitutional as well as local disturbances of the nervous centers.

That though hereditary predisposition may

to some extent be an exciting cause of hysteria, such an influence as an original factor should nevertheless be regarded as unimportant.

That when hysteria occurs later in life it is *prima facie* evidence that the genital tract has become diseased or has taken on a preternatural condition.

That if, after careful examination, such a diagnosis of local physical obliquity cannot be established, we should, though the patient suffers from perverted sensations referable to the nervous tracts, be suspicious that disease has taken lodgment in some portion of the encephalon or the organism under a more immediate control of the central nervous system.

C. C. Frederick, B.S., M D., Adjunct Professor of Obstetrics, Medical Department Niagara University, etc., Buffalo, N. Y., discusses

The Relations of the Minor to the Major Diseases of Women.

In regard to which are the minor and which the major diseases of women, he considers malignant disease of the uterus, and any condition or growth of the pelvic organs which necessitates opening of the peritoneum for its cure, a major disease. All the rest are minor. The principal minor defects of the female genitalia consist of lacerations of the perineum and pelvic floor, lacerations of the cervix and backward or downward displacements of the uterus. These tend to produce an endometritis or to aggravate a diseased endometrium and favor the development of endometrial septic processes and their deleterious effects. The author admits that a torn perineum may exist for years without discomfort to the patient or any visible effects on her pelvic organs. So long as it does no harm it needs operation only as a preventive measure. When the uterus becomes misplaced as a consequence of the tear the displacement should be corrected by means of a pessary, or if this will not be retained the perineum must be repaired. If a cystocele or rectocele exist, anterior and posterior colporrhaphy should be done at the same time as the perineorrhaphy. A lacerated cervix, with ectropion and hypertrophy of the lips, is one of the most fertile sources of disease of the endometrium. Soothing applications give only temporary relief. The only permanent relief is to be had by curetting the uterus and repairing the laceration. Then replace the uterus and hold it in position till involution occurs, and the cure will be complete. The author takes a firm stand against intra-uterine medication as useless and often positively harmful as ordinarily practiced. It may be safely said that the dirty sound and intra-uterine medication have caused more serious disease in women than the conditions for which the treatment was given would ever have caused.

In the treatment of these cases constitutional treatment should not be forgotten. Tonic treatment will do much for some of these cases. The author states that he has often seen several malarial subjects with profuse uterine catarrh entirely cured by antimalarial treatment.

True endometritis is best treated by thorough dilatation of the cervical canal, removal of the diseased membrane with the sharp curette and thorough disinfection of the cavity. It may then be packed with iodoform gauze to insure good drainage. The author insists that, in spite of all that has been written to the contrary, the operation is as safe as any in gynecology, provided there is no extensive disease of the uterine appendages. Of course the operation is to be done with full antiseptic precautions.

The author closes his paper as follows: "Prevent puerperal infection by practicing antiseptic midwifery; discourage abortions on the part of your patients; have your patients' lacerated cervices and perinei repaired before they lead to diseased conditions; build up your female patients' general health; do very little or no intra-uterine medication; cure their endometritis, whether due to gonorrhœa or other causes; correct displacements, if there be no chronic tubal or ovarian trouble or adhesions, and you will prevent much of the pelvic disease for which hundreds of capital operations are done every week, and you will have answered the question, 'What can I do to prevent so much pelvic disease?'"

Dr. J. H. Carstens, Professor of Obstetrics and Clinical Gynecology in the Detroit College of Medicine, etc., contributes a paper on

The Incision in Abdominal Surgery.

A summing up of the author's methods is as follows:

1. With a small, narrow-bladed, sharp knife make a clean incision through the skin of the necessary length, and with another sweep (or two) cut through the linea alba, muscle, etc. Lift the peritoneum with your fingers, open it and enlarge the incision. The use of forceps to lift the tissues, or the grooved directors, is unnecessary.

2. In closing the abdominal incision use animal ligature, kangaroo tendon or catgut. First carefully bring together the peritoneum in a running stitch, then the transversalis fascia, and the rectus if the incision is through this muscle. Then most carefully bring together—edge to edge—the tendinous insertion of the oblique muscles. The loose cellular tissue above and fat can be brought together in one or two tiers, according to thickness. Bring the skin together carefully with Marcy's cobbler's stitch, thus burying all your sutures.

3. Then seal with collodion, and if everything connected with the operation has been perfectly antiseptic, absolute primary union will take place, the different layers of the abdominal wall will have been brought together as nearly as possible as they were in the first place, and no hernia will result.

4. In cases of extensive umbilical, ventral or other hernia it is best to bring the peritoneum together with an over-and-over stitch of kangaroo tendon or catgut; to make a flap-splitting operation of the ring, which is brought together with silkworm gut or silver wire, which is buried, and then the fat and

skin are united with the buried animal suture.

Two papers appear in this issue on

Catheterization of the Fallopian Tubes.

The author of the first paper, Llewellyn Eliot, A.M., M.D., of Washington, D. C., discusses two propositions: 1. It is possible to catheterize the Fallopian tubes. 2. The possibility being established, the attempt to treat cases of diseased tubes by applications made directly to their surfaces is justifiable. The author quotes cases to prove that the first proposition is true and therefore the second becomes self-evident. Still he is obliged to confess that it is not possible to catheterize the tubes in every instance, and that the procedure is not free from danger. The method is applicable, he thinks, to those cases of salpingitis, hydro- and pyo-salpinx which refuse operation.

The second paper on this subject is from the pen of William P. Carr, M.D., of Washington, D. C., and in it the author enters into the dangers of the procedure and cautions against perforation of the uterine or tubal wall, or the forcing of pus into the peritoneal cavity. With its limitations he cannot predict a brilliant future for the operation.

Two papers are also devoted to the subject of

Puerperal Insanity.

The first, by George Byrd Harrison, M.D., of Washington, D.C., deals with the causation and symptoms of the disease. Of the symptomatology of puerperal insanity he says that there is none *per se*. Of course with the aid of physical examination and other outside proof, we may differentiate the mania and melancholia associated with the childbed state from the other and commoner forms of the same disease. But they have no positive characters of their own. Even the "consciousness of a delusion," which has been elaborately dwelt upon, can scarcely be accepted as a shibboleth. Examination of the patient and the history of the case can alone be relied upon for differential diagnosis.

The second paper, by William Mercer Sprigg, M.D., Professor of Physiology, Medical Department National University, Washington, D C., deals with the prognosis and treatment of the disorder. The early routine treatment of these cases by blood-letting, purging, blistering, etc., is interesting only as a relic of the past. The breasts usually do not require attention, as nature, without assistance, shuts off the supply of milk. Abscess of the breast in this condition is most unusual. The anemia should be treated with food and the iron preparations, together with good hygiene, sunlight and fresh air. The bowels should be kept open daily. If the iron preparations fail in their effect Fowler's solution of arsenic might be used. Sedatives and hypnotics should be used with caution, as a supporting, not a depressing, treatment is indicated. In severe cases with coated tongue, great nervous and vascular depression, neither opium nor chloral should be used. Morphia, hypodermically, a single full dose at bed-time, will usually insure rest. A hot bath, followed by a good rubbing and a glass of hot milk, will sometimes have a very quieting effect if given at bed-time. Hydrobromate of hyoscine has been used hypodermically with good results. The bromide salts have a prominent place in the treatment. Stimulants should be given when the pulse is weak and nutrition defective—and given for physical and not for mental effect on the patient. Mental diversion or entertainment should occupy an important place in the treatment. The bringing on of premature labor is to be condemned.

Eugene Boise, M.D., of Grand Rapids, Mich., discusses "The Cause of the Thirst Following Abdominal Sections." The theory advanced is that it is caused by contraction of the arterioles of the abdominal viscera, and consequent lessened tension in their capillaries and compensatory withdrawal of water from their tissues, all of which is due to the irritation of the abdominal sympathetic nerves during the operation.

The remaining papers in this issue are: "Stray Thoughts on the Mechanism of Labor," by A. F. A. King, M.D., Washington, D.C. "One Year's Death Record in Abdominal Surgery," by J. H. Carstens, Detroit, Mich. "The Management of an Ordinary Case of Labor in Hospital and in Private Practice," by Francis Smith Nash, M.D., Washington, D.C.

IN THE BRITISH JOURNAL OF DERMATOLOGY

for October Dr. W. Allan Jamieson writes of

Some Rare Skin Diseases.

The author was consulted by a man of 55 years, rather fat; had been accustomed to use alcohol; was subject to rheumatic gout, but had enjoyed pretty good health. Of late the patient had tired easily, slept poorly, arose in the morning with a thickly coated tongue. His appetite had been failing for about one year, and although he consumed considerable liquid it was not owing to any great thirst.

The dimensions of the liver and the action of the bowels seemed normal. Urine was acid, copious, sp. gr. 1.010, without deposit or discoverable tube casts, but containing small quantities of sugar and albumen.

An irritable eruption was complained of; had appeared two or three years before; itched always, but worse at night. Examination showed a discrete, symmetrical eruption of oval or stellate form, solid elevations, some almost the size of a split pea. The color was pinkish or reddish-brown, sometimes with a yellowish or brownish marginal line around a pink center. They did not wholly vanish on pressure. The hands, face and mucous membranes were free, but the outer aspects of the forearms, the shoulders, back and, to a less extent, the chest and abdomen were affected. The flanks contained a couple of leucodermic areas.

The patient was ordered to stop arsenic, which he had been using, was put on a selected diet, told to wash with menthol soap in the morning, and to apply at night a solution of one part ichthyol in three of water, and to take a pill of a quarter of a grain each

of codeine and extract of lactucarium and one-half grain of extract of nux vomica. He improved under this, but the dose of codeine could not be increased. The symptoms all improved, but after the rash had disappeared with the exception of a few stains, sugar and albumen might still be found in the urine.

Xanthoma diabeticorum usually selects the knees, elbows and buttocks, and the eruption when colored is usually yellow. None of these characteristics appeared in this case.

One authority states that the eruption may lose the yellow color as it grows older, but even the new spots in this case were pink.

A case of hydroa vacciniforme sen æstivale is reported, peculiar in the patient being a girl of eight years, and with very great scarring from healed vesicles. The application of borated starch poultices, followed by painting with zinc-ichthyol jelly, seemed beneficial, but the case passed from observation.

Another case reported was a woman 54 years old, in whom the menopause occurred four years previously, who complained of itchiness and burning heat in the vulva. It was found that a patch of scleroderma contracted the arms and passed forward on the perineum, and had caused a linear ulcer. A small patch of scleroderma was found on the prepuce of the clitoris, another on the right leg, running from the patella half-way to the ankle, a large patch over the ribs on each side (in front), and two more above each clavicle, looking like inlaid ivory.

Dr. Stephen Mackenzie had a paper on

Acne,

which was freely discussed.

The disease he thinks due to faulty secretion by the sebaceous glands, consequen-plugging of the ducts and inflammation from retained secretion.

The treatment he thought should be strictly local and should consist in the removal of superfluous sebum and epithelial accumulations; stimulation of the glands to healthy activity; keeping the skin aseptic to exclude pus cocci. Various medicated soaps met the requirements thoroughly, and should be accompanied by bathing the face in hot water and steaming.

Ointments and lotions are useful to allay inflammation, zinc and belladonna being noteworthy in this class.

During the discussion, most of those present seemed to think that, if not dependent on constipation and indigestion, acne was usually accompanied by these disorders, and the cure was hastened by appropriate treatment for these.

IN THE JOURNAL OF CUTANEOUS AND GENITO-URINARY DISEASES

for October Dr. William H. Kingston writes of

Stone in the Bladder—Choice of Operation.

The author's experience leads him to think that in all cases where the urethra will admit or can be made to admit a lithotrite, litholopaxy is superior to cutting; that this method is applicable to older men and to younger children than it was formerly thought to be, and that improved instruments permit the crushing of larger and harder calculi than formerly; that in women dilatation of the urethra is usually sufficient to permit extraction without crushing; that in those cases where the size of the calculus is doubtful and cutting is found necessary, it is more prudent to choose the suprapubic operation, as the stone might be too large for the lateral incision. When cutting is necessary the author expresses himself in favor of the lateral incision when practicable, but fails to state what circumstances would cause him to choose this, in adults, instead of litholopaxy. It appears objectionable to break a stone before removing through an incision.

Dr. George Thomas Jackson writes of

Thyroid Feeding in Diseases of the Skin.

The author used thyroid preparations in a few cases of xeroderma and dermatitis exfoliativa, and finding unpleasant constitutional symptoms from the drug and no permanent improvement in the disease, thinks this treatment unsuited to anything so trivial as a skin affection.

Drs. J. Abbott Cantrell and Emanuel J. Stout conclude their paper on "Favus of the Head and Body."

Erysipelas.

During a long practice I have found the following local application most excellent:

℞ Aquæ puræ..... Oj.
Ferri sulphatis q. s. facere solution-eum ad saturandum.

M. Sig.: Keep a cloth wet with the mixture to the parts affected.

℞ Iodoformi..... ʒj.
Olei rosæ..... gtt v.
Collodion..... ʒx.

M. Sig.: Use as a local application four or five times daily. The burning pain is relieved at once.

℞ Acidi carbolici (liquid)..... } āā ʒj.
Spir. vini rectificati..... }
Tincturæ iodini..... }
Olei terebinthinæ..... ʒij.
Glycerini..... ʒv.

M. Sig.: Paint parts affected three or four times daily.

℞ Salol..... ʒij.
Iodoi..... ʒj.
Glycerini..... } āā ʒj.
Collodion..... }

M. Sig.: Apply to affected surface three or four times daily.

—*Dr. N.B. Kennedy in the Texas Sanitarium*

Chronic Conjunctivitis of Eczematous Patients.

Dr. Von Sehlen (*La Semaine Medicale*) speaks highly of the following salve in the occasionally chronic conjunctivitis of eczema:

℞ Ichthyol..... 0.20-50 | o (grs. iij-viij).
Powdered starch.. } 10 | o āā (ʒijss).
Oxide zinc..... }
Vaseline..... 25 | o (ʒvj).

Mix very carefully.

The salve is applied to the palpebral conjunctiva by means of a little glass rod. If it has been well mixed and the ichthyol be equally distributed through the vaseline, only a slight burning sensation will be experienced. Under its influence obstinate eczematous conjunctivitis, often leading to ectropion, will be rapidly cured—*Pritchard.*

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M.D.

MEDICINE

An Old Medical Protest Against Railroad Trains.

According to *La Medecine Moderne*, there is preserved at Nuremberg, in the archives of the first railroad company built in Germany, a protest offered at the time of the construction of the line, by the physicians of Bavaria. Among other reasons given for opposing the scheme is this psychological one: "Traveling in vehicles drawn by a locomotive ought to be forbidden in the interest of public health. The rapid motion cannot fail to produce in the passengers the mental affection known as *delirium furiosum*. Even when travelers consent to expose themselves to this danger, the government at least is in duty bound to protect the public. A single glance thrown upon a locomotive passing at great speed is sufficient to cause the same cerebral derangement. It is accordingly absolutely necessary to build a fence three meters high on each side of the railway tracks."—*Boston Medical and Surgical Journal.*

Methyl-violet in Diphtheria.

Methyl-violet is practically unirritating to the faucial and gastric mucous membranes, and can be used in almost any desired strength as a topical application, or may be administered internally in pill form in doses of one-tenth grain to one grain, from one to three times a day.

As a local application to the throat in diphtheria a solution is used, the strength of which may vary from one to ten per cent., usually a two per cent. solution. The effort is made to apply the solution, by means of a cotton swab, as accurately as possible to the diseased area. It is not, however, possible to limit the agent in most cases to the diseased spot, but the healthy mucous membrane becomes deeply stained by the agent.

It was used in twenty-six cases of diphtheria and only two died, both of which had laryngeal involvement.—*W. P. Munn (Denver, Col.) in Pittsburg Med. Rev.*

The Glycosuria of Pregnancy.

It is as well to know that the appearance of sugar in the urine of puerperal women is not, *per se*, to be accepted as evidence of any morbid condition calling for urgent measures. Sugar, in greater or lesser amount, is present, according to Dr. Lewers, in the urine of most puerperal women, but even when comparatively abundant its presence was not associated with the classic collateral symptoms of glycosuria. The amount indeed stands in some sort of relationship to the lacteal secretion, or rather excretion; when the flow is free, whether copious or otherwise, the amount of sugar discoverable in the urine is small. If, however, the output of milk is checked in any way, mechanically or otherwise, a certain proportion of the lactose is eliminated by the kidneys, giving rise to passing glycosuria. Belladonna, probably by reason of its effect in diminishing the excretion of milk, increases the percentage of urinary sugar. It is to be supposed that the glycosuria disappears when lactation comes to an end, but as a matter of fact it has seldom been possible to continue the observations a sufficient length of time to ascertain it by direct examination.—*Medical Record.*

The Dietetic Treatment of Phthisis.

Dr. Henry P. Loomis formulates the following rules:

1. Never take cough mixtures if they can possibly be avoided
2. Food should be taken at least six times in the twenty-four hours; light repasts between the meals and on retiring.
3. Never eat when suffering from bodily or mental fatigue or nervous excitement.
4. Take a nap or at least lie down for twenty minutes before the mid-day and evening meals.
5. Take only a small amount of fluids with the meals.
6. The starches and sugars should be avoided; also indigestible articles of diet.
7. As far as possible each meal should consist of articles requiring about the same time to digest.
8. Only eat so much as can be easily and fully digested in the time allowed.
9. As long as possible systematic exercise should be taken to favor assimilation and excretion; when this is impossible, massage or passive exercise should be undergone.
10. The food must be nicely prepared and daintily served—made inviting in every way.

He proposes the following as a diet-sheet in the early stage: On awakening, eight ounces of equal parts of milk and seltzer, taken slowly through half an hour. Breakfast: Oatmeal and cracked wheat with a little sugar and an abundance of cream, rare steak or loin chop with fat, soft-boiled or poached egg, cream-toast, half pint of milk, small cup of coffee. Early lunch: Half pint of milk or small teacup of squeezed beef-juice with stale bread. Mid-day meal: Fish, broiled or stewed chicken, scraped meat ball, stale bread and plenty of butter, baked apples and cream, two glasses of milk. Afternoon lunch: Bottle of kumyss, raw scraped beef sandwich, or goblet of milk. Dinner: Substantial meat or fish soup, rare roast beef or mutton, game,

slice of stale bread, spinach, cauliflower, fresh vegetables in season (sparingly).—*The Practitioner.*

The Treatment of Sciatica.

Dr. Græme M. Hammond, of New York (*Post-Graduate*), discusses the treatment of rheumatic sciatica, or that arising from cold. In mild cases, ten or fifteen grains of phenacetine will usually afford relief; but in many cases this will not suffice Morphia should be given under the skin, and injected deeply into the part. Enough should be given to afford complete relief, as this seems to have a special action on the course of the disease. Perfect rest in bed will cut many cases short that might otherwise be very obstinate. The constant application of heat, as in hot rubber bags, is of the greatest value. The constant electric current is also an agent of much value in the treatment of these cases. Patients feel relief after each application.—*Dominion Med. Monthly.*

The Action of Calomel and Olive Oil.

Victor Schultz (*Berliner klinische Wochenschrift*) has noticed that in a patient upon whom a necropsy demonstrated that no gall-stones existed, a few hours after the administration of olive oil the gall-bladder, which up to that time had been soft and insensitive, became very tense, sensitive and painful, and then acquired that degree of painfulness which could be characterized as gall-stone colic. The significance of the fact is that the ingestion of olive oil is followed by a marked excretion of bile. As regards calomel, it has no influence upon a markedly increased biliary excretion; but rather, in gall-stones and diseases of the biliary passages, it acts not by increasing the biliary excretion, but by its disinfecting properties, thus diminishing the abnormal irritation of the mucous membrane of the gall-bladder.—*American Journal Med. Sciences.*

A Medical Library Association has been recently organized in Grand Rapids, Mich. The purpose of the association is the formation of a reference library upon medicine and allied sciences. The new organization starts out with a membership of about fifty, composed not alone of physicians, but dentists and pharmacists as well.

One of the features of the association will be the admission of non-residents to membership, whereby for a small annual fee physicians outside of the city may avail themselves of the advantages of the library.

A competent librarian will be secured and the most approved methods of cataloguing and indexing will be made use of. Books and journals are being liberally donated by those interested in the project, and the success of the enterprise is assured.

The following officers have been elected: Dr. G. K. Johnson, President; Dr. S. G. Milner, Vice-President; Dr. W. A. Dorland, Treasurer; Dr. Reuben Peterson, Secretary.

Terpene Hydrate in Bronchial Catarrh.

Dr. Murrell is desirous once more of calling attention to the value of terpene hydrate in the treatment of affections of bronchial and nasal mucous membranes. Its properties have been well known for many years, but in this country it has never been a popular remedy, and its claims seem to have been overlooked in favor of pure terebene and other similar compounds. It is a hydrate of turpentine, and is made by treating oil of turpentine with nitric acid and alcohol. It is a solid, and has somewhat the appearance of chloral hydrate. Its odor, which is slight, resembles that of pure terebene. For some months past he has prescribed it in solution containing five grains to the half ounce, made up with simple elixir and flavored either with tincture of Virginia prune and syrup of tar, or with the aqua laurocerasi. Terpene not only relieves cough and lessens bronchial secretion, but is a diuretic, and has been used with advantage in neuralgia. *La Tribune Medicale* recommends the following pill:

℞ Creosote... ..... } āā gr. j.
Terpene hydrate..... .... }
Iodoform..... }

Ft. pil. no. 1. Sig.: One pill three times a day, together with an inhalation of about two per cent. solution of eucalyptol every two hours.

—*Southern Clinic.*

Chloroform in the Treatment of Chorea.

When the convulsive movements of chorea are of sufficient severity to interfere with the indigestion of food, or sleep is prevented by the attacks, there is great danger of rapid exhaustion, and even death may be apprehended. In such cases chloroform will prove a veritable boon. Not only will the anæsthetic induce perfect relaxation and relief from the present attack, but the insensibility produced by it often passes into natural sleep, and the patient awakes refreshed and completely rested, with marked abatement of the hitherto constant movements. The improvement in some cases is marvelous. Not only is the sufferer allowed a much-needed rest by this means, but the attacks are delayed, their intensity mitigated, nourishment may be taken with relish, and a decided change in condition results. In the beginning, it may be necessary to use the chloroform three or four times daily, but as improvement occurs, only one administration in the twenty-four hours will be found necessary. Usually a month is required before the permanency of the cure is established.—*Louisville Medical Journal.*

Sterility.

Palmer: Gonorrhœa is one of the most frequent, even the most frequent, causes of sterility in the female; it exists often when not expected. Aside from gonorrhœa the most common cause is an imperfect development of the uterus. The organ is small, the cervix is elongated and concial, there is a pinhole os externum, and often anteflexion. Years

ago the treatment of the conoid cervix and pinhole os externum was to incise it; then followed the use of tents, but I think these have pretty well gone out of use; then came dilatation by means of the metallic dilator; and since we have had dilatation by means of galvanism. I have had several cases in the last ten years in which conception has followed the use of galvanism. In all cases there was more or less of conoid cervix and pinhole os externum. The case to which I particularly refer was one sent to me years ago. She had no leucorrhœa and was in good general health. I commenced the dilatation of the os externum and the cervical canal by means of galvanism. I passed one electrode through the canal and placed the other over the abdomen. The current was applied fifteen minutes twice a week for several months. After a married sterile life of seven or eight years she is now pregnant in her eighth month. I have seen similar results follow this treatment in other cases. The negative pole is used when one wishes to expand the cervical canal; the positive is a hæmostatic. I am disposed to think this is one the best methods of treatment in these cases, because it is comparatively painless, because it is comparatively safe, and because it leads to permanency of results which is not otherwise obtained.—*Arch. Gyn.*

Intracapsular Fractures.

Dr. Bedford Brown, of Alexandria, Va., gave the result of his experience with fourteen cases of femur, in a paper before A. M. A. He believes a good rule to work by in treating intracapsular fractures of the cervix femoris in the aged, is to so manage the case from the beginning as not to expect union of the fractured bones, but on the contrary to so conduct the management of the case as will, if possible, insure a good, strong false joint, by which after a time the patient can regain a fair degree of locomotion for the balance of life. To bring about this desirable object, the pelvis from the anterior superior spinous process is enveloped with a broad flannel roller four inches wide and fifteen feet long, applied down below the trochanters. This flannel bandage gives comfort by the support that it affords the fractured bones, and the prevention of too much motion, and gives opportunity to the soft parts involved to throw out adhesive exudations. This is the full extent of the apparatus to be applied. As for the balance of treatment, pillows long and short, small and large, are to be relied on for splints and supports. Comfort of position is to be the guiding rule in the management of this class of cases. The ingenuity of surgeon and nurse will be taxed to so arrange the pillow splints as to insure comfort, relieve pain and secure sleep. When these objects are accomplished all has been accomplished that judgment and experience can do until inflammatory action subsides and the process of fibrinous exudation is completed, and then the false joint is ready for use. To attempt, on the contrary, to confine this class of patients in a stiff apparatus with a view of accomplishing that which no power can eve effect—a union of bone or ligament—is to condemn our patient not only to unnecessary suffering, but to certain death.—*Richmond Jour. Practice.*

Paralysis of the Elevators and Depressors of the Eyeball.

Dr. Charles Wray in the London *Lancet*, gives two simple methods of pointing out the action of the four muscles involved in elevating and depressing the eye, and the situation of the false images when they are paralyzed. The action of each muscle, and the inclination of the false image when the muscle is paralyzed, are represented by four radii drawn from the center of the cornea, and forming a figure like the capital letter X.

For the examination of the action of these muscles the author sets forth the four following rules, which enable one to rapidly diagnose which muscle is paralyzed:

1. If the diplopia exists in the upper portion of the field of vision, the upper image belongs to the eye paralyzed.
2. If there is diplopia in the lower portion of the visual field, the lower image belongs to the eye paralyzed.
3. The paralysis of an oblique muscle gives rise to an internal strabismus and homonymous diplopia.
4. The paralysis of a straight muscle gives rise to an internal strabismus and crossed diplopia.

Treatment of Whooping-Cough.

Dr. G. Variot (*Lo Sperimentale*) has obtained notable advantages in the treatment of pertussis by the administration three times a day, in a little sweetened milk, of a teaspoonful of the following:

℞
Aq. dest.....8 ounces.
Potassii bromidi.....2 drachms.
Tinct. valerian.....2 drachms.

In children below two years a teaspoonful will suffice. An hour after this dose he gives a teaspoonful of the syrup of turpentine. The turpentine acts as a balsamic and the other drugs as anti-spasmodics. The presence of rales in the chest indicates ipecac in the powder form, a dose every morning to favor expectoration. Keep the child in the open air while there are no serious broncho-pulmonary symptoms. As a diet keep the child on albuminoids and meat, eggs, raw meat, extract of beef, etc., to which may be added some tonic, as the wine of cinchona or the syrup of the lactophosphate of lime.—*Lancet-Clinic.*

Thuja in Exophthalmic Goitre.

Dr. C. Sargent, of Taos, N. M., claims excellent results from treatment of exophthalmic goitre, with enlargement of thyroid the size of a hen's egg, with thuja occidentalis. In a brief period of time the result was marked by "no more eye trouble, no palpitation of the heart and the enlargement of the thyroid all gone."—*Med. Standard.*

SURGERY.

A New Operation for Procidentia Uteri.

In a short preliminary Dr. H. W. Freund (*Central. f. Gynæcol.*) calls attention to two cases of procidentia uteri cured by means of silver-wire sutures circularly drawn underneath the mucous membrane of the vagina. The sutures are placed in such a manner as to form a supporting pillar to the uterus, and tightened sufficiently to prevent prolapsus after replacement. The technique is simple. The silver wires, usually four or five in number, are drawn by means of a curved needle underneath the mucous membrane of the vagina, the first wire being about one inch from the os externum. The wire is carried underneath the mucous membrane to its full circumference, always re-entering the puncture of exit until it reaches the first puncture, when the portio vaginalis is pushed back by an assistant and the wire drawn tight, twisted and allowed to sink beneath the mucous membrane. In distances of three-fourths of an inch the sutures are introduced until the vagina is reinverted and the uterus replaced. Care must be taken not to allow any of the wire to lie on the surface lest suppuration and necrosis should follow.

In the two cases reported only local anesthesia was resorted to and the results were highly gratifying. The cases operated upon had both passed the menopause, and the author questions the advisability of using this procedure on women liable to become pregnant.—*Cincinnati Lancet Clinic.*

Cauterization of the Nares and Accidents that may Follow.

Dr. E. F. Ingals, of Chicago, believed that, when properly done, this operation is quite as free from discomfort or danger as any other minor surgical procedure. Serious results were due to carelessness or inexperience upon the part of the operator, which induced him to make extensive wounds or to repeat burnings too frequently. He summarized his conclusions as follows: 1. It is important that antiseptic applications be regularly employed after cauterization of the nasal mucous membrane, and that the nostril be closed by cotton for several days, whenever the patient is out of doors, to prevent taking cold. 2. As a rule, at least two weeks should intervene between operations upon opposite sides, and three or four weeks between those on the same side. 3. No serious results are at all likely to follow cauterizations made in this way. 4. Practically, all cases of hypertrophic or intumescent rhinitis may be cured by this treatment, though occasionally portions of the turbinated body must be removed. —*Journal American Medical Association.*

Treatment of Inoperable Malignant Tumors.

Dr. W. B. Coley, New York, in a paper before the meeting of the American Surgical Association, in Washington, D. C., reported twenty-five cases of sarcoma treated by inoculating the patient with the toxines of erysipelas and bacillus prodigiosus, with six cures. Nine markedly improved and eight slightly improved. Also eight cancer cases, all but one of which showed improvement. The author's conclusions were as follows:

First.—The curative action of erysipelas upon malignant tumors is an established fact.

Second.—This action is much more powerful on sarcoma than carcinoma.

Third.—This action is chiefly due to the soluble toxines of the erysipelas streptococcus, which toxines may be isolated and used with safety and accuracy.

Fourth.—This action is greatly increased by the addition of the toxines of bacillus prodigiosus.

Fifth.— The toxines, to be of value, must come from very virulent cultures and must be freshly prepared.

Sixth.—The results obtained from the use of these toxines, without danger, are so nearly, if not quite, equal to those obtained from an attack of erysipelas, that inoculation should rarely be resorted to.—*International Journal of Surgery.*

OBSTETRICS.

Concerning the Treatment of Abortion.

Eckstein (*Prager medicinische Wochenschrift*), as assistant in Martin's clinic, has had opportunity to study sixty cases of abortion treated by Martin's principles in his private clinic in Berlin. He attaches the greatest importance in the curettage of the uterus to the thorough emptying of the tubal angles, as remains of placenta or portions of membranes are especially liable to be attached there. In nearly all the cases Eckstein followed a manual or instrumental emptying of the uterus with curettage, by the idea that an imperfect separation of the decidua and a consequent endometritis is thereby to be prevented. The results of this method were very satisfactory. From his experience he deducts the following:

1. The instrumental method of the treatment of abortion is the only rational one.

2. The recognition of the cause of bleeding from the uterus is of the greatest importance, and therefore in every uterine hemorrhage a careful examination should be made.

3. Ergot and similar drugs should only be used when the uterus is empty.

4. If abortion is in progress, a tamponade of the vagina is only indicated when there is no dilatation of the os uteri.

5. When the dilatation of the os is sufficient, the emptying of the uterus, in spontaneous abortion, is indicated.

6. In large embryos, from the fifth month on, one conducts the abortion as in labor at term.

7. In abortion attended with fever and the decomposition of the product, the uterus should be emptied of its contents as quickly as possible.

8. A thorough curettage of the endometrium should follow every emptying of the uterus in abortion.— *Western Med. Reporter.*

Vinum Ipecacuanhæ as an Oxytocic.

A contributor to the *Brit. Med. Jour.* says: "In the course of general practice extending over many years I invariably carried a bottle of vinum ipecacuanhæ in my midwifery bag, and rarely, if ever, gave a dose of ergot in the first stage of labor. Time after time on coming to a confinement case where the pains had been feeble and inefficient or had totally ceased, two or three 10 or 15 minim doses of the wine at intervals of ten minutes had been followed in a surprisingly short time by energetic uterine action, with a rapid termination of the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals. Conviction of the value of the drug for this purpose induces me to give my experience of it, believing that its merits will be recognized by any one who chooses to give it a trial."—*Med. Times.*

PATHOLOGY.

What We May See in the Sputum.

Microscopical examinations have so far superseded the older methods that we frequently overlook many valuable points of diagnosis that might be observed with the unaided eye. We may first observe the quantity, reaction and consistence.

Patients with bronchitis or cavities, and especially cases of bronchiectasis, have the largest quantity.

Unless contaminated with vomited matter, sputum is always alkaline.

Mucus sputum usually occurs early in acute bronchitis.

Muco-purulent sputum in chronic bronchitis and in phthisis, or in later stages of acute bronchitis and pneumonia.

Purulent sputum (nearly pure pus) indicates a cavity or an empyema.

Serous sputum is fluid, and contains albumen and is frothy. Characteristic of edema of lungs.

Blood expectorated from the lungs is usually bright red, frothy and alkaline. From the stomach it is dark, nearly brown, and acid in reaction.

Coal soot makes a black or gray sputum.

Fibers and pieces of lung tissue indicate a cavity.

Fibrinous casts indicate fibrinous inflammations. These are frequently found in croupous bronchitis.—*Kan. Med. Jour.*

ARMY AND NAVY.

CHANGE IN THE U. S. ARMY FROM OCTOBER 21, 1894, TO OCTOBER 27, 1894.

First Lieutenant Charles F. Kieffer, Assistant Surgeon, will be relieved from duty at Fort Assinniboine, Montana, upon the return to that post of First Lieutenant Edward L. Munson, Assistant Surgeon, from duty in the field, and will then report for duty at Fort Buford, North Dakota.

NEWS AND MISCELLANY.

The Horace Wells Anniversary Celebration.

All are doubtless aware of the action of the American Dental Association at its recent meeting held at Old Point Comfort, Va., with reference to holding a national celebration of the fiftieth anniversary of the discovery of the anæsthetic properties of nitrous oxide by Dr. Horace Wells.

The committee, by vote of the American Dental Association, was instructed to secure two papers to be read at the celebration; one upon the "History of Anæsthesia," by Prof. Thomas Fillebrown, of Boston, and one on the "Benefits of Anæsthesia to Mankind," by Prof. James. E. Garretson, of Philadelphia.

The committee was further instructed to arrange for a banquet to follow the meeting, at which distinguished speakers shall make appropriate addresses; a full report of the celebration, including the papers and addresses, to be printed and issued as a permanent souvenir of the occasion.

Arrangements have been completed to the extent of securing favorable responses from the essayists named, whose papers are now in course of preparation.

The banquet arrangements are also largely completed. To cover the expenses attending the celebration, the fee for admission to the banquet has been placed at $6.00. It is necessary that the committee shall have ample notice of the number who will be in attendance, in order that places may be provided for all who may desire to attend.

Subscriptions will be invited later for the souvenir volume, at a price sufficient to cover the cost of publication.

The celebration will be held in Philadelphia, in Association Hall, Fifteenth and Chestnut Streets, at 2 P.M. on Tuesday, December 11, 1894. The banquet at the Union League at 6:30 P.M.

All are cordially invited to participate in this event, which should enlist the enthusiastic support of every member of our profession.

To that end you are requested to send your check and notify the Chairman of the Anæsthesia Committee at the earliest date possible, in order that an official invitation may be sent to you.

It will be proposed at the meeting that subscriptions be invited for a permanent memorial, to take such shape as the meeting shall decide. (Signed)

LOUIS JACK,	S. H. GUILFORD,
E. T. DARBY,	WM. CARR,
C. N. PEIRCE,	A. L. NORTHROP,
D. N. MCQUILLEN,	H. B. NOBLE,
E. C. KIRK,	JAS. MCMANUS.

J. D. THOMAS, *Chairman*,
912 Walnut Street, Philadelphia.

J. H. MUSSER, M.D., has removed to 1927 Chestnut Street, from Fortieth and Locust Streets.